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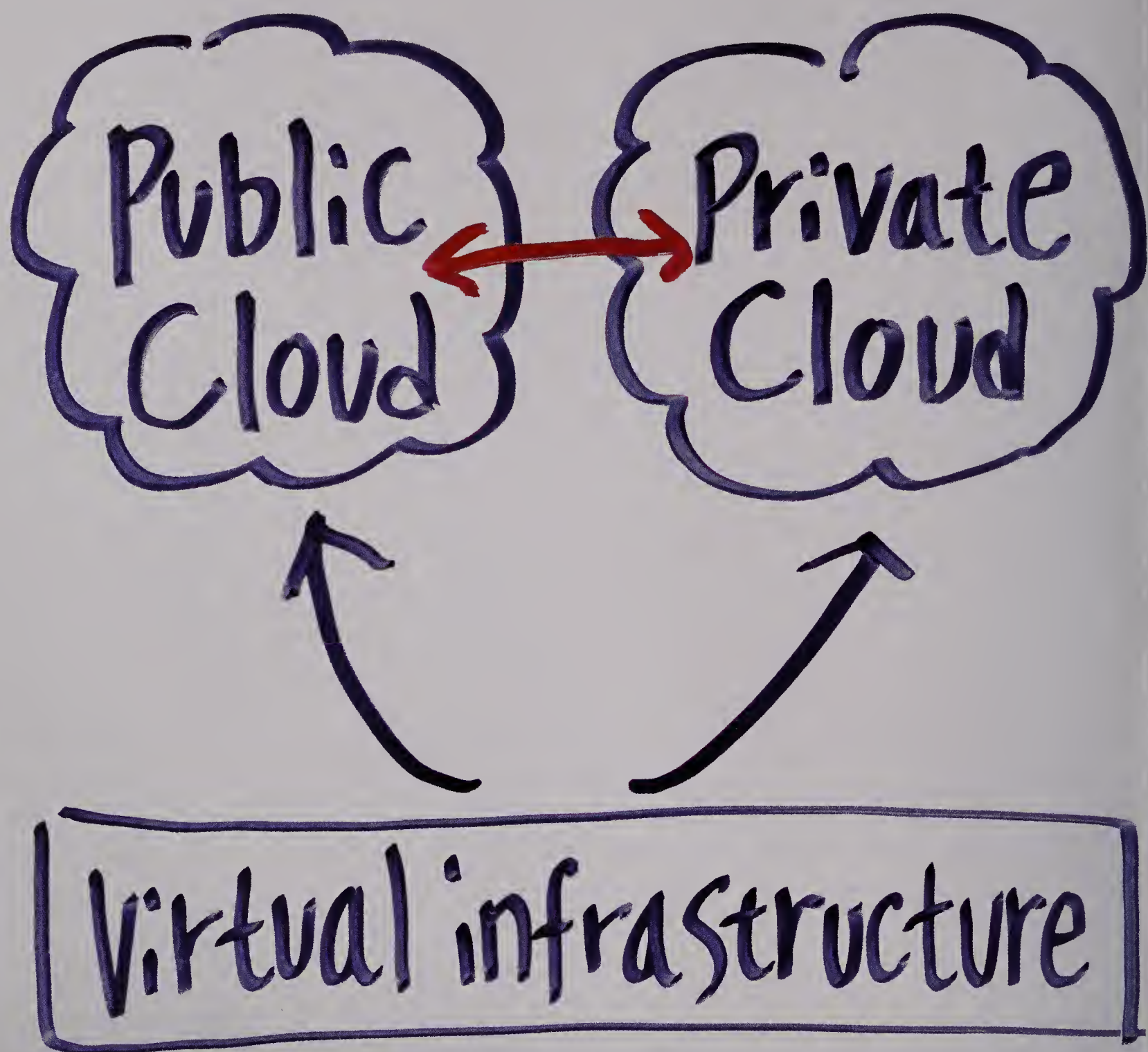


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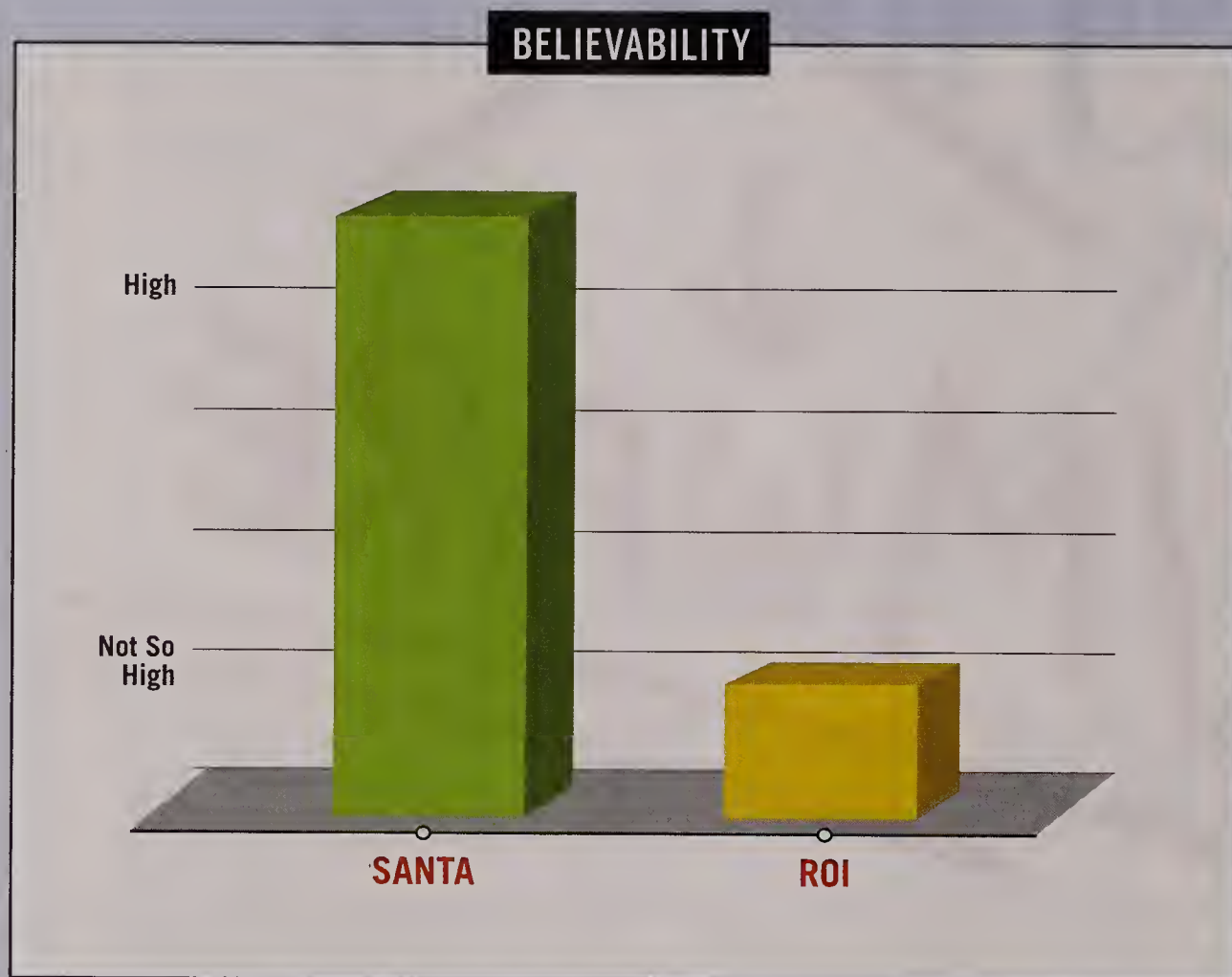
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STATE OF THE CIO 2012

SPECIAL REPORT

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COVER STORY You and your fellow executives have conflicting priorities on cost and competitors, says our 2012 State of the CIO survey

BY KIM S. NASH



The Role of IT in Enabling an Analytic Organization

A CIO Survey indicates **three-quarters of IT leaders believe IT and business should have equal ownership of analytics projects**, yet only 39 percent say that this situation actually exists.

How does an organization make the best use of the business data it gathers and generates? And what is IT's role in that best-use scenario? These are questions analytics vendor SAS and tech media firm IDG set out to explore in a recent survey of IT management. While many IT executives are seeking the best ways to establish a culture of analytics in their organizations, the survey reveals a divide between the desire to use data effectively and the reality of dealing with corporate culture and entrenched roles.

Driven By Data

The first and most obvious question concerns the role that data plays in an organization. It's interesting to note that, according to survey results, almost half of IT executives consider their organizations to be highly data-driven.

However, it's important to point out that experts say to use business data most effectively, organizations must look forward to cast their analysis in predictive mode. Organizations that use business data only to look backward, to judge past actions, are missing the most effective data-driven opportunities.

To make the best use of business data requires sophisticated analytic tools and

the expertise to implement and operate them. Because data analysis—both the function and the results—crosses over between business and IT, coordination between the two sides is critical. That means the proper approach to the analytics process is key.

Unfortunately, when it comes to the most effective ownership model for analytical projects and processes, there is a significant gap in what IT leaders propose and the reality at their organizations, the survey reveals. Three-quarters of IT leaders believe IT and business should have equal ownership of analytics projects, yet only 39 percent say that this situation actually exists in their organizations.



METHODOLOGY: SAS and IDG asked senior IT decision-makers across industries about their companies' use of data analytics and their involvement in it, including organizational structure, processes and strategies. The survey was conducted online between July 11, 2011 and July 18, 2011 among members of the CIO Forum on LinkedIn. Results are based on a total of 150 responses

The Best Way

It's clear that IT leaders are concerned with the best way to make analytic projects an integral part of the corporate culture. The question is: How do you get there from here?

According to the survey, almost half of IT leaders say analytic IT initiatives should be driven by the business side. More than one third say this is the case in their organizations.

However, that business-side approach isn't the only way to get analytic projects off the ground. More than one quarter of IT leaders say analytic IT initiatives should be driven from the top down, mandated by top-level executives. And a significant number say their analytic IT initiatives are driven from the bottom up by ad hoc IT/business groups that get traction for their projects through quick wins.

Still, there's more to establishing a culture of analytics within an organization than simply getting analytic projects launched. The best approach to the analytics culture may be your most important decision.

What Skills Where

To encourage and enable the analytic organization, IT leaders must make sure the right mix of abilities are in the right areas of the organization to make sure analytic expertise, and opportunities, are effectively distributed. As far as the skills related to data analytics are concerned, they are decentralized, survey results reveal—and in a significant way.

Data aggregation and data reporting skills reside mostly within the IT organization, survey respondents say. On the other hand, data analysis skills reside mostly within the lines of business.

That's significant because it generally reflects corporate culture and tradition. Data aggregation and reporting, historically, are areas of IT expertise, while analysis is mostly a business function.

However, that may not be the most effective distribution of data analytic capabilities in an organization looking to make optimum use of business data. This is another area of cooperation with business executives that the IT leader must cultivate.

Who's Driving?

The dichotomy between business and IT often manifests itself in how closely integrated the IT function is into the decision-making process—or not. The integration may be critical to establishing an analytic culture within an organization.

It's important to note that a significant number of IT executives say decision-makers at their companies do not rely on IT to provide the information they need to make strategic decisions, according to the survey. And less than half of IT executives feel the decision-makers at their companies make good use of the information resources available to them for setting company strategy.



IT executive management is in the best place to encourage and establish the analytic organization—one that is data-driven, forward-looking, and opportunistic in its analytics projects and processes.

This may be a major reason executive IT management are most deeply involved in promoting or encouraging the use of analytic capabilities, according to the survey. Significantly, organizations that indicate analytics projects are owned equally by business and IT are the most likely to report that their decision-makers make good use of available information resources, survey results reveal.

Forward Looking

Even while a convincing number of IT executives describe their companies as highly data-driven, the most common way businesses leverage data is historical

—interpreting past actions, according to survey respondents. Yet, there are encouraging signs that more companies are embracing the future-oriented problem-solving nature of analytics, to address current market conditions and proactively anticipate market demands.

Once again, survey results reveal those organizations that say analytics projects are owned equally by business and IT are significantly more likely to use data to address competitive advantage or future direction.

Decisions By Design

In terms of decision-making, an analytic organization will never eliminate business experience or savvy, nor should it. But IT leaders looking to establish this culture are understandably concerned that their organizations get the right mix of intuition and insight.

Too often executive business management overrides data-oriented decisions with ones that are based on human judgment, according to survey respondents. A tendency toward gut-level decision-making is true for line-of-business management as well, IT leaders say.

A penchant for dismissing business data doesn't necessarily go down well. A compelling number of IT leaders report disagreements between business and IT about the extent to which data—rather than intuition—should be used to support strategy and decision-making.

IT Needs To Lead

Survey results show that IT leaders know business data and analytics can be used more effectively in their organizations. And IT executive management is in the best place to encourage and establish the analytic organization—one that is data-driven, forward-looking, and opportunistic in its analytics projects and processes. The survey also makes clear that IT leaders need to be just that—leaders—in pointing their organizations toward the future of competitive business strategy. ■

To download the full report, please go to www.sas.com/ciostudy



FROM THE
EDITOR IN CHIEF

State of Anxiety

These anxious, uncertain times are clearly reflected in our 2012 State of the CIO research. The results from this time last year seem giddy in retrospect, with our annual research findings meriting a headline that shouted out “Energizing Business.”

This year’s report is more somber (see “Business Disconnect,” Page 38), drawing attention to some mismatched key priorities between IT and business leaders on cost-cutting and competition. In addition to doing our own comprehensive survey of 596 CIOs and senior IT executives, we joined forces with Forrester Research so we could compare our results with the top priorities identified by 377 non-IT executives and another 386 North American CIOs.

Considering how much attention CIOs pay to IT that delivers genuine, measurable, strategic business value, it’s startling to see large gaps in opinion on concerns as fundamental as cost-cutting and competitive focus. While 84 percent of business leaders ranked cost-cutting as a critical priority, only 37 percent of CIOs did. A similar chasm turned up on competitive focus.

So what’s the big deal with a few differences of opinion? “If you don’t think the same way about money and competition, how can you align with—never mind accelerate or help set—business goals?” writes Senior Editor Kim S. Nash. “Well, you can’t.”

Such misalignments can lead to IT projects that don’t produce the results business units are looking for, notes CIO Nancy Wolk of Alcoa, who uses a simple test to sanity-check IT activities. “We think of everything we do in terms of, ‘Does it help us grow or help us generate cash?’”

Our story delves into a number of creative ways CIOs are dispelling doubts about IT’s impact on business goals. We gathered up strategies from CIOs at Facebook, Maple Leaf Foods, Allergan, Restaurant Technologies, Ogilvy and Mather, ITT, Alcoa and Caesar’s Entertainment. We found bright spots that offset the gloom of some of the research findings as well.

It’s easy to forget how slow the pace of evolution can feel when you’re watching the IT-business relationship mature. But the ultimate direction is crystal clear to every CIO we know. “We need to be in lockstep,” says CIO Karla Viglasky of ITT. “You can’t gain credibility with the business by saying, ‘I need to help you understand what I do.’ They don’t care. Instead, you prove yourself every single day.”

Make today one of those days.

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
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start

CHATTER

Tablet Tips You Need

Tablets’ **ease of use** makes them an attractive addition to any workforce. But Assistant Managing Editor Shane O’Neill says there are several key things **potential enterprise adopters** should know. First off, make sure to write **policies and secure access** to data before handing tablets to workers. Also, evaluate which workers really need them, such as **salespeople and executives** who travel often. Another area of worry for CIOs: **governance and compliance**, which becomes more complicated because tablets are so difficult to secure that they change the nature of the game. www.cio.com/article/695629

Tech Changes Coming

O’Neill also brings us the recent Forrester Research report about the **most critical technology changes** in the next three years. Forrester says business intelligence is now allowing CIOs to justify business decisions using **hard numbers** rather than gut feelings. Forrester concludes that CIOs should plan to capitalize on the lower total cost of ownership offered by **mobile apps and cloud**. www.cio.com/article/692280

Hot IT Hiring Updates

The start of 2012 is bringing good things to the **IT job market**. Senior Features Writer Meridith Levinson discovered that, thanks to **cloud computing and mobility**, several new roles have been created for IT professionals. The **top positions in 2012** will be mobile application developers, software developers, user experience designers, data warehouse experts, and infrastructure experts. Levinson also cites experts saying **hiring is on the upswing** and pay should increase based on competition to find **top talent**. www.cio.com/article/695585

Compiled by Editorial Assistant Lauren Brousell. Have a comment about a story in this issue? Go to www.cio.com/issue/20120101 or write to letters@cio.com.

THE TRANSITION TO

High-Def Video Surveillance

Our society's attention toward physical security

and public safety has exploded in recent years. It only takes a casual trip to the neighborhood shopping mall to witness the noticeable increase in security officers and cameras that have come to pervade our daily lives. Video surveillance is at the heart of many security systems because it helps security officials respond in real-time to threats, store footage for later analysis, provide usable evidence in court, monitor assets and staff productivity, and comply with regulations.

Today, most installed surveillance systems use analog technology, which results in grainy footage because of the low resolution of the cameras and poor-quality recording equipment. Yet a much higher level of image quality is now available with high-definition (HD) digital video surveillance technology.

The perceived higher cost of HD, however, means that organizations are not jumping to upgrade. New HD components must also be compatible with existing analog surveillance equipment and IT infrastructure, and may require advanced IT knowledge to install.

Avigilon has responded to both the demand and the barriers for the adoption of HD surveillance by architecting a complete system that leverages the latest technologies available to deliver the best image detail, yet also eases the burden of cost, installation and support.

Our HD Network Video Management Software and megapixel cameras have been designed to capture and preserve the highest quality surveillance footage possible. Our proprietary High-Definition Stream Management (HDSM) technology compresses and preserves image quality, while intelligently managing image transmission so you can minimize storage and network bandwidth costs. Our system is also straightforward to install since it runs on an existing IT infrastructure and is compatible with analog cameras. This compatibility also means that an organization doesn't have to convert everything to digital at once.

Can you afford to upgrade? Avigilon customers say, "yes." Customers have shared that HD video is less expensive than analog when considering costs from a total system perspective. Here are just a few reasons why:

- > Since our cameras are IP-based, you only need to install a single Ethernet cable to run the camera. Analog cameras require a coaxial cable and a power cable, which doubles the labor.
- > Our megapixel cameras offer extremely high-resolution images, so you can use far fewer cameras to cover an area compared with analog cameras. In fact, just one of our 29 MP cameras can replace 95 analog cameras.
- > IT and security personnel can easily manage the Avigilon Control Center software without the need for costly training.

Already, we are seeing rapid adoption of HD systems in gaming, casinos and retail environments, as security officials and executives understand the advantages of HD. The higher-quality HD video enables retailers to use surveillance systems for not only theft prevention and public safety, but for valuable applications such as analyzing traffic flow and staffing productivity.

As government and industry security regulations place pressure on companies and government agencies, we expect HD systems will make up 80 percent of total video surveillance sales in just three to four years. Helping customers make this transition, without threatening profits and cash flow in this tough economy, is our top priority at Avigilon.

www.avigilon.com

Alexander Fernandes is President, CEO, Chairman, Co-Founder of Avigilon. Fernandes has more than 20 years of industry experience leading companies that develop, manufacture and market high-end digital imaging technologies to a broad range of markets.



BY ALEXANDER
FERNANDES
PRESIDENT AND CEO,
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FROM THE **CEO**

Resolutions Inc.

Last month I made some predictions for the Top 10 trends that will affect your work life in 2012. Now that the New Year's celebrations are behind us, it's a good time to reflect on what your Top 10 New Year's resolutions might be (beyond losing 10 pounds or learning to hang glide). My humble suggestions for you are:

1. Meet with your customers more often. C'mon, admit it, you don't do it nearly as much as you should. Grab your calendar and make time.

2. Learn more marketing speak. One of the best ways to understand customers is to know how marketing pros appeal to them. Set up lunch with your CMO and arrive ready to talk about the marketing automation tools that may be infiltrating your organization already.

3. Amp up your tweeting and blogging. As you become a more authentic part of the conversation with employees, customers and partners, you'll be amazed at what you learn (and what you have to offer).

4. Deliver on time and on budget, but especially on value. The business value of IT is Priority Number One now. The rest is table stakes.

5. Think past the hype. What can cloud, mobile and consumer technologies do for your business? CIOs who don't lead these efforts will lose credibility and relevance.

6. Balance innovation and execution. These are the yin and yang of your leadership and management skills.

7. Keep an open mind about emerging technologies. New products and vendors may surprise you. I'm thinking of Windows 8, Hadoop, virtual desktops, unified communications, consumer IT, and so on.

8. Turn "IT" into "It." Focus on understanding Information more than on Technology. Your influence and business savvy will grow.

9. Be all about the G word. Try to create revenue, leadership and organizational growth, as well as professional and personal growth.

10. Stop worrying about what you can't control. You can't control the economy, but you can control match your ability to innovate, execute and drive amazing results.

Does this list match your own resolutions? I'd love to hear from you if it does.

In the meantime, I wish you a happy, healthy and successful 2012.

Michael Friedenber, President and CEO
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TRACE3 OUTLIERAWARD

History has shown repeatedly that the majority of the significant, positive changes are engineered by people and organizations that venture outside the norm, those bold enough to prudently break with convention — those known as “outliers.”

In celebration of this spirit of risk-taking, Trace3 has created the **Inaugural Trace3 Outlier Award**. This unique award recognizes organizations and the people whose technology decisions and actions have delivered innovation, growth and cultural contributions. The 2012 Outlier finalists were chosen from nationwide nominations by an elite group of peers and IT experts. This year's prestigious panel of judges consisting of CIOs, VPs and other prominent IT and business leaders will choose the 2012 Outlier of the Year on February 2, 2012, at The M Resort in Las Vegas, Nevada, during Trace3's Executive Briefing Conference. The winner will be announced in a special issue of *CIO* magazine in March 2012.

Congratulations to all who made the final cut!



» Finalists



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THE **TOP LINE** INTERVIEW :: Daniel Burrus

Avoiding Future Shock

Too many senior executives get strategic planning wrong because they don't know how to interpret trends **BY KIM S. NASH**



What's wrong with how most companies create a business strategy?

C-suites spend a lot of time focusing on execution. The problem is they may not be executing on a full strategy. Too often, a strategic plan is a static document. We have a meeting and write it up, including objectives, goals, time lines and accountability. But then it's fixed in time until the next time we have a strategic planning session and come up with a new one. We need to make the strategic plan alive in the minds of our people.

If you ask somebody, "What's your strategic plan?" we don't want them to say, "Just a minute. I'll find it on my computer." That means they're not living it.

Traditional strategy focuses on scenario planning. "If this happens, we'll do that." But people fail to realize there are two types of trends: hard and soft. Hard trends will happen. Soft trends might happen.

What's a hard trend?

A hard trend is going to happen whether you like it or not. There are three prime drivers of

hard trends: technology, demographics and government regulation. When there's a law passed, pay attention. It's loaded with hard trends that give you amazing opportunities if you pay attention. Will we be able to use cell phones and tablets to tap into a Watson-like supercomputer? Yes. Will we be able to use mobile devices to tap into logistics and supply chain systems? Yes. So why are you waiting?

What's a soft trend?

Soft trends are ones you can change. Seventy-eight million baby boomers are getting older and their healthcare needs are going to increase. Hard trends. Meanwhile, over the last 10 years in the United States, there has been a decreasing number of people becoming doctors and nurses. That's soft. You can change it. As a business leader, you can see a collision course, then change. That's strategic planning.

What happens if you fail to distinguish between hard and soft trends?

In the year 2000, the federal government

forecasted a trillion-dollar budget surplus. How could they be so wrong? They were looking at good numbers but treating soft trends as if they were hard trends. As if they would happen for sure. Elvis Presley died in 1977. Every year after for 10 years, there were more Elvis impersonators. Back then, I projected those numbers out and found that by the year 2000, one in three Americans would be Elvis impersonators. That conclusion ignored other trends and treated a soft trend—that Elvis impersonators were increasing—as a hard trend, something that would definitely happen. That's the exact same thing the federal government did.

If we make a mistake on a hard trend versus a soft trend, it can take a company down. Why did Motorola, which was dominant in the 1980s with cell phones, lose out? They treated digital as a soft trend and lost. Digital was happening whether they liked it or not, but they stayed with analog too long. Polaroid and Kodak thought digital was a fad, too. Look at Blockbuster versus

Netflix. Why are we making mistakes? We're not correctly separating the soft trends and hard trends. Part of that is also because most people protect and defend the status quo.

What's wrong with a strategy centered on sales and profits?

Most strategic plans are financial plans in disguise. Money is not the whole ball game, but most people treat it that way. This year, 70 percent of Apple's profits are coming from products that were impossible to make four years ago. Consider four years from now. Will at least half your profits come from things you're not even doing today?

To get there, you need more than a financial plan. You need a plan that encompasses trends—correctly identified—that you can respond to and that you can redirect in your favor.

Daniel Burrus is a business strategy consultant and the author of *Flosh Foresight: How to See the Invisible and Do the Impossible*. Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: twitter.com/knash99.

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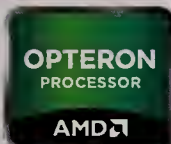
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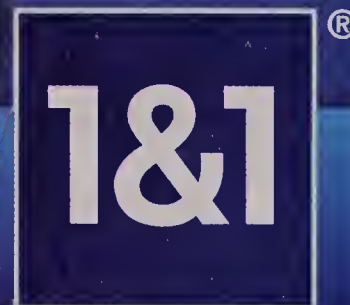


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Cozying Up to Consumer Habits

IT professionals embrace the consumerization of IT while seeking to secure work done on personal devices **BY LAUREN BROUSELL**

Workers want more flexibility between home and the office, and companies are warming up to the idea. The 2011 IDG Enterprise Consumerization of IT Survey queried 556 IT professionals, including 309 heads of IT, and found that 49 percent allow employees to work on personal devices.

While most companies aren't yet able to support every operating system and device, 44 percent say they are working to expand the list, with 74 percent supporting BlackBerrys and 67 percent working with employees' iPhones.

Tablets, a relatively new addition to the list of consumer devices used in the enterprise, are quickly catching up to smartphones in corporate adoption. Forty-five percent of those polled say they currently support employee-owned tablets.

Shyam Desigan, CIO and CFO at Volunteers of America Chesapeake, has brought tablets to the forefront of his mobile testing. His organization deals with a lot of temporary employees and needs its case-management and attendance applications to be accessible from whatever device a volunteer has. But, Desigan says, for security reasons, those are the only applications he makes accessible.

Scott Saundry, CTO of law firm Fraser Milner Casgrain,

is diversifying his mobile strategy to provide lawyers better access to corporate applications and email while on the road. Saundry says they need their mobile devices to work seamlessly and not disrupt their workflow.

"Having a good mobile platform allows them to maintain that out-of-office connection," he says. He gives employees the choice of an iPhone or BlackBerry and supports a small number of Windows phones. "We are trying to allow [them] to pick what makes sense to them."

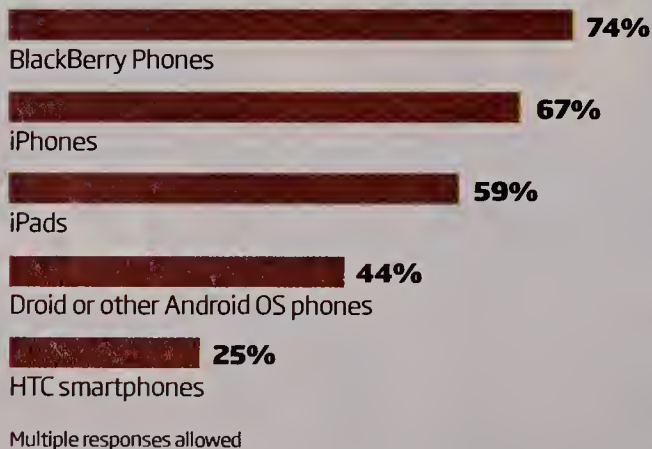
In order to allow lawyers the freedom they want, Saundry also assigns them part of the security responsibility. "It's not just an IT problem, it's also the end users' [problem]," he says. "We still have to be in control of the data."

Despite the rise of more progressive mobile strategies, security concerns linger for many CIOs, with 82 percent citing that as the most bothersome issue preventing IT from becoming fully consumer-centric. Saundry agrees security is imperative. "That's why we don't compromise on hardware encryption and passwords," he says.

Contact Editorial Assistant Lauren Brousell at lbrousell@cio.com. Follow her on Twitter: twitter.com/lbrousell.

BlackBerry: Watch Your Back

Which types of consumer devices does your IT department support?



What Matters Most

When evaluating consumer tech vendors, the following factors were deemed most important:

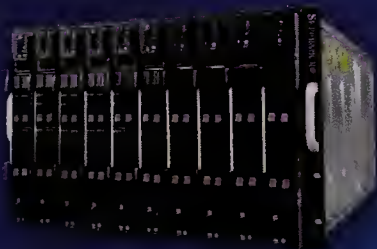


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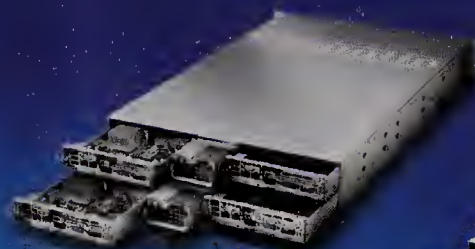
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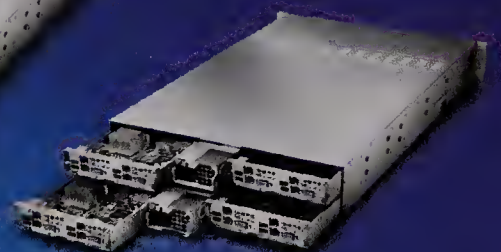
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VIEWPOINT



Padmasree Warrior

SENIOR VICE PRESIDENT, ENGINEERING; CHIEF TECHNOLOGY OFFICER, CISCO
As chief technology officer and senior vice president of Engineering, Padmasree Warrior partners closely with the senior executive team and board of directors to define strategy, drive innovation across the company and co-lead an engineering organization of approximately 22,000. Warrior has overall general manager responsibilities for the Enterprise and Commercial business and focuses on core switching, collaboration, data center/virtualization and cloud computing. Warrior joined Cisco in 2007, prior to which she was the chief technology officer at Motorola.

FOR MORE INFORMATION: download the free whitepaper "The Economics of Networking" at www.cio.com/whitepapers/ciscosmart



Smart Business Begins with an Intelligent Network

You are proposing a Cisco Intelligent Network. What's happening in the business and technology worlds that requires intelligence in the network?

If you look at the megatrends changing the landscape for enterprises of all sizes and across all sectors, you'll find three of them. Mobility is the first—not just bring-your-own-device and mobile workers but also the mobility requirements for enterprise applications moving out of the enterprise. The second major trend is the shift toward the cloud, driven by virtualization in the data center as well as on the client—desktop virtualization and the ability to consume applications and services across any device from any location. The third major trend is collaboration, driven by video. It's about immersive collaboration—how you connect people and how people come together, work together, solve problems together. You need solutions for all these trends, and you need intelligence in the network to provide those solutions.

These are technology trends, but they are also affecting how and where business gets done. So how do we secure applications, deliver applications and consume services? These questions put additional burdens on CIOs with respect to services deployment, security, mobility and how you enable policy for different applications. These can be delivered only by the network, from the network. The data center is virtualizing, and the desktop is virtualizing, and you have this wave of new devices coming into the enterprise. So today's network is not just about connecting the client to the data center; it's really a fabric that has to have intelligence to enable mobility, cloud and collaboration.

You have been quoted as saying that an architectural approach is needed to solve these problems. Why?

It requires an architectural approach because CIOs are not looking for a single box or a single product. Enabling policy, identity, virtualization of the desktop ... all of this means that

products have to connect. An enterprise architecture has to connect the experience and the application to the architecture, and only an architectural approach makes this possible.

Cisco has many architectures: Borderless Networks, Data Center/Virtualization, Collaboration, SecureX, Medianet. Does this replace all of them?

No, and here's where we are really unique compared to others in the industry. We've developed an end-to-end architectural approach for enterprises and service providers, but our approach is also modular. We partitioned that architecture and focused it on buying centers. So, for example, the data center architecture is a part of the larger enterprise architecture or service provider architecture, but it is targeted at people who care about data centers. In our view, Borderless Networks, SecureX, Data Center/Virtualization and Collaboration all fit together to make the larger enterprise architecture work seamlessly. In our approach, the overall architecture must exist and work together but can also be focused on the needs of the individual buying centers.

What about service providers? How do they play into this?

More and more the boundaries are blurring when you think about enterprise IT and what service providers can provide. As enterprises move to the cloud, there are certain applications they will consume from cloud service providers. And in many cases, very large enterprises are becoming service providers themselves. So I think the transition is happening in both ways. As large enterprises build out private clouds, they are becoming service providers, and as service providers look for new ways to deliver applications from their clouds, there is a certain class of applications that enterprises will consume from public clouds delivered via the service providers. And, again, it is the intelligence in the network that binds these cases together and makes them possible.

Practical BI Strategies: Getting the Best ROI

Fuel Your Business Success with a Strong BI Foundation

Leveraging information to make the right decisions is critical in today's business climate. A strong BI program can help your business identify opportunities for growth and threats to success. Great BI can also help it respond to market changes quickly, drive inefficiencies out of your processes and understand what your customers want—as well as how much to charge for it.

Challenges to Optimizing BI

According to a CIO MarketPulse Study conducted for TEKsystems, most companies that implement BI programs aren't making the most of them. Sixty-nine percent of the 201 IT decision makers polled rate their company's overall BI program as average, fair or poor. And an additional 66% rate the effectiveness of their BI programs as average or worse. What are the key obstacles to optimizing BI?

A lack of alignment with and involvement from the business. Ninety percent of respondents that rate their overall BI program as excellent or very good say that their company's BI initiatives have supported the achievement of strategic business decisions, compared to only 39% of those respondents that rate their overall BI program as fair or poor.

Bad data. Nearly one-half of the poll respondents report that their BI structures rarely or never incorporate a formal data stewardship program with an automated toolset or portal for data quality management. And 46% report their BI structures rarely or never incorporate a formal data quality program that includes data quality scorecards.

A lack of speed. Fifty-three percent of respondents are neutral or disagree that their company's BI initiatives help them compare results in real-time. Fifty-five percent are neutral or disagree that their company's BI initiatives help them make fewer last-minute decisions.

Critical BI Success Factors

To succeed, BI programs must be approached cohesively, and with business goals in mind. Successful BI programs must include the following:

Properly aligned teams. Defined roles and responsi-

bilities are essential for BI success. Whether a business performs BI in-house or outsources certain areas, the necessary roles for an effective program include project management teams, BI center of excellence (COE) teams and BI competency center (BICC) teams.

Top-down prototyping. Business-focused prototypes improve business and IT alignment and lead to a more effective BI program that answers key business challenges.

Ongoing data quality program. Data quality is a lifestyle that requires constant improvement and maintenance. The ultimate measure of a mature data quality program is its ability to offer strong data quality that supports self-service governance portals for business.

By following these best practices, companies can make the most of their BI investments—and, more importantly, generate insights that will help them stay ahead of the competition.

The TEKsystems Approach

TEKsystems' Data Services practice provides business intelligence and integration services through various delivery models including highly collaborative managed services, fully outsourced BI and integration solutions and report and ETL factory services. Thanks to TEKsystems' tenured heritage in IT staffing, deploying over 70,000 IT professionals to support initiatives at more than 5,500 clients annually, we possess an unrivaled point of view into what works, what doesn't and what's possible in IT. We've paired our practical perspective, proven resource model and human capital management insights with top-of-the-line architectural expertise, a strong focus on business alignment and a collaborative approach. The result? We know how to design solutions that not only get you where you want to go, but also provide solutions that make you stronger for having partnered with us.

For more information on TEKsystems' Data Services Practice, go to www.teksystems.com.

For more information on this topic, download a free white paper at www.cio.com/whitepapers/teksystems2.



Trash to Treasure

Waste Management's new e-commerce site creates additional revenue streams and gives IT sales quotas **BY KIM S. NASH**

Trash doesn't seem like much of an online business, but Waste Management says otherwise.

Puneet Bhasin, CIO of the \$13.5 billion company, launched an e-commerce site late last year where residential and business customers can rent dumpsters and get price quotes for trash and recycling services. The company plans to add new products for sale every two months during 2012, Bhasin says, and IT staffers will also get sales quotas to fill.

Waste Management is among the relatively few companies putting the IT group at the center of customer-facing, revenue-producing projects. Many CIOs understand the importance of such strategic work but meet obstacles trying to make it happen.

CIOs recognize the need to improve their companies' products and services: 83 percent of 386 IT leaders say that's a high or critical priority, according to our annual State of the CIO survey. (See "Business Disconnect," Page 38.) Yet CIOs generally don't spend much of their time identifying opportunities for competitive advantage or studying customer needs, our survey finds. Just 17 >>>

►►► **E-commerce** Continued from Page 19

percent and 9 percent, respectively, say they are involved in those activities.

However, that kind of outward-facing focus must be a significant part of the job for any CIO who hopes to become a strategic leader, says Bobby Cameron, an analyst at Forrester Research. And generating revenue is only the first step, Cameron says. CIOs should be using technology to create ways to make customers happier and more loyal, he says. "Don't stop at revenue. Make services more valuable."

Bhasin agrees. He is rolling out custom mobile devices that are carried aboard Waste Management's 20,000 trucks and that record such variables as load weights, routes and time spent at customer stops and landfills. By combining that data with a customer's service history, the company could suggest more economical products or redirect trucks to more efficient routes, he says. The data can also be fed back to business customers so that they might change their trash habits to recycle more or produce less waste. "It's a transformation in how we think about the company," he says, from trash hauler to logistics and information provider.

The e-commerce effort is expected to produce \$200 million in sales in the next few years, Bhasin says, and this year the IT staffer who created the site will be responsible for as-yet-undetermined levels of sales.

"Many of the people on this team have worked for large Internet sites in the past and are used to being accountable for the financial results achieved," he says.

The IT group built the site on IBM's WebSphere server with Java tools. Doing the development in-house was new to Waste Management, says Bhasin, who joined the company in 2009.

"When I analyzed our staff, I saw that most of the future-oriented work was being done by consultants," he says. He dismissed many of them and hired full-time designers, coders and user-experience experts. "I want our own team to build the future."

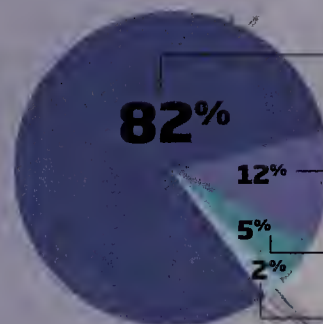
Contact Senior Editor Kim S. Nash at knash@cio.com. Follow her on Twitter: twitter.com/knash99.

crunch

BYOT, But Don't Drop It

Most companies that have a bring-your-own-technology program require employees to handle repairs for their devices

If an employee's personal device breaks, who is responsible for fixing it?



Employees are responsible for having their devices fixed themselves and for paying for the repair.

Employees are responsible for having their devices fixed themselves and our organization pays for the repair.

Our organization assumes responsibility for fixing employee-owned devices.

Not sure

Note: Percentages do not add to 100 due to rounding.

SOURCE: CIO SURVEY, AUGUST 2011, OF 131 COMPANIES WITH B.Y.O.T. PROGRAMS

Facebook Spreads East

Facebook announced plans to open an engineering office in New York City this year.

"We will hire as much talent as we can find," says Facebook Chief Operating Officer Sheryl Sandberg. The company has no set limit on the number of engineers it will hire and says it chose New York because of its technology talent pool.

"We realized New York has huge momentum doing entrepreneurial engineering and deep technology," says Mike Schroepfer, Facebook's worldwide head of engineering. "This is not a satellite office. This will be a core part of our engineering stack that builds key features," he says.

The location will be Facebook's first engineering office off the West Coast. Engineer Manager Serkan Piantino will oversee the new office. He currently oversees the engineering behind Facebook messages and chat.

New York officials celebrated the news as an example of how the region is becoming a technology hot spot. Mayor Michael Bloomberg called the decision "conclusive proof that we're well on our way to achieving our goal to become the world's number-one hub for information technology and social media."

—Joab Jackson

..... **30%** Additional time tablet users spend consuming news now, compared to before they had a tablet. Pew Research Center **20%** U.S. consumers who say they research products on Facebook before purchasing. Beyond and M Booth



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Easier Migration to Modern PC

As momentum builds for Windows 7 Enterprise deployment, are you taking advantage of all available migration tools?

MODERNIZING THE DESKTOP IS A CRITICAL ISSUE as IT seeks to accommodate end-user and business demands for virtualization, cloud and consumerization of IT. In many cases, IT reliance on the tried and true Windows XP desktop platform is holding organizations back.

Many of these organizations have not upgraded their operating system in 5 to 10 years, and may not fully realize that migrating to a new operating system for PCs is much simpler and more automated today.

Meanwhile, IT organizations are being tasked to support the consumerization of IT, with new devices that leverage technologies like desktop virtualization and cloud computing. Their ability to tap into these capabilities and foster flexible workstyles is hindered by aging desktop platforms. According to research firm Net Applications, more than 50 percent of enterprise PCs still rely on Windows XP.

Windows XP supports an immeasurable number of legacy business applications. However, it was not designed to accommodate the intelligent infrastructure to manage the increasingly complex desktop environment required for users to work anywhere and access a rich, personalized experience online and offline. Business units and employees are demanding anywhere connectivity and a personalized experience on all devices.

» Windows XP: Trusted, not Timeless

“Windows XP was designed for a specific point in time; well it’s now 10 years later,” says Jason Campbell,

group product marketing manager with Microsoft. “Folks coming out of college don’t want to work on a Windows XP machine and we’re nearing the end of extended support for that operating system.” Microsoft previously announced it would terminate extended support for Windows XP on April 8, 2014, three years beyond the normal 10-year product support life cycle.

Termination of Windows XP support means an end to security updates and support. ISVs will wind down support for new applications, and hardware vendors will tail off supporting Windows XP drivers for new hardware. Running an unsupported version of Windows could put organizations at risk and add significant management costs and complexity.

According to Microsoft, the vast majority of enterprise customers who enjoyed great value with Windows XP for the last decade are now moving to Windows 7 Enterprise. Market research firm IDC reported last year that nearly all enterprise companies (89 percent) surveyed would move forward with their Windows 7 plans within the next 24 months*.

Still, some have been holding back on full-scale migration. According to Campbell, IT professionals frequently offer the rationale: “Windows XP is good enough.” There is also fear of application incompatibility, an issue that Microsoft acknowledges and for which it

provides free tools and resources. In addition, Windows XP desktops can be virtualized within Windows 7 to handle legacy applications. Others fear the cost, had difficulty with previous migrations, or have concerns that the IT team lacks the updated deployment skills to tackle the task.

» Deployment Advances

The actual cost of migrating may not be as much as anticipated, when fully factoring in the efficiencies gained with the new OS and the expenses incurred by extending the life of an older OS that hardware and software providers are increasingly leaving behind.

Staying with outdated technology makes it exceedingly difficult for companies to match technological innovations that competitors are taking advantage of. "OEMs are bringing out new innovative devices that will not support BIOS and drivers for Windows XP; they're optimizing for Windows 7," says Campbell.

Much has changed over the past decade in terms of the processes, tools and resources available to smooth an organization-wide OS deployment. Unum, the Fortune 500 insurance firm, utilized Microsoft tools to implement a largely zero-touch deployment process that enabled it to deploy Windows 7 to more than 11,000 PCs in just 12 months, rather than the three years it would have taken based on previous upgrade projects.

"Getting to a single platform in 12 months instead of 36 months enabled substantial savings in labor-related costs and reduced our overall testing efforts by 50 percent," says Blake Pease, assistant vice president of end user computing with Unum.

» Use the Right Tools

One of the tools Unum used was the Microsoft Deployment Toolkit (MDT), the Microsoft Solution Accelerator for operating system and application deployment that provides unified tools and processes, reduced deployment time and zero touch installation.

Another Microsoft tool, the Microsoft Application Compatibility Toolkit (ACT), helps evaluate and mitigate application compatibility issues before deploying Windows 7 or a new version of Windows Internet Explorer.

A third resource, the Microsoft Assessment and Planning (MAP) Toolkit, collects detailed infrastructure information needed to plan a migration to Windows 7 Enterprise.

The Windows Automated Installation Kit is another asset with which IT can:

- automate Windows installations
- capture Windows images with ImageX
- configure and modify packages
- migrate user profiles and data.

"All of these tools are available free from Microsoft," Stephen Rose, Windows IT Pro community manager points out. "Many IT pros don't realize how many free tools are available to help them move to a new modern desktop. Once they understand how easy it is to use these great tools like MDT, IT pros can migrate a machine from Windows XP to Windows 7, with data, in under 45 minutes. They can even the Windows XP desktop inside of Windows 7 as part of that migration."

» Springboard to Action

With an increasing number of enterprises well embarked on migration to Windows 7, can you afford to continue to invest in a time-limited desktop technology? Businesses who hold on to a more than 10-year-old platform risk alienating workers who want technology that matches what consumers can easily obtain. They may lag in innovation and business agility, losing the allegiance of key customers to more nimble competitors.

**IDC, Deployment Opportunities for Windows 7, doc #223694, June 2010*

To find available technical resources, free tools, and expert guidance to ease your Windows 7 deployment, go to www.Microsoft.com/Springboard.

Consumerization of IT may be one of the most significant business productivity issues of this decade. To learn more about Flexible Workstyle solutions from Microsoft, go to www.Microsoft.com/Workstyle.

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Time to Reinvent Reinvention

Transformational projects have been based on the wrong science. They need to be managed as people projects. **BY JACK BERGSTRAND**

While working on more than \$2 billion worth of reinvention projects in the past 15 years, I've often reflected on why large companies can be so good at running their organizations but struggle so much when it comes to changing them. Any way you slice it, reinvention is hard. It is difficult even when it's successful. And it hurts when projects stumble, spiral out of control, or crash and burn—which happens as much as 70 percent of the time.

The problem is that while we have been trained to put science to work for us on transformational initiatives, the experts taught us the wrong science. Management legend Peter Drucker was the first to hint at this. For decades, conventional project management has been based on physical sciences, but we're facing a social science dilemma. We've been taught to use highly structured project-management techniques in our highly dynamic organizations. And when it works poorly, we often try to become even more structured. Not only does that approach not work, it doesn't even make sense.

The structured approach is based on Frederick Taylor's *Principles of Scientific Management*, which was published in 1911 and works great for assembly lines and similar repetitive tasks. But organizational dynamics are neither structured nor predictable. Our project-management techniques were designed for industrial work that was visible, standalone and unchanging. But the forces we face in today's organizations are invisible, interdependent and ever-changing.

In large reinvention efforts, the big challenges usually involve people. Some people are strategic and hate process; some love numbers and deadlines but can't stand (other) people; some love process and resist new ideas; and others love people but couldn't hit a deadline to save their lives. Physical science, which is the basis for conventional proj-

Conventional project management has been based on the physical sciences, but we're facing a social science dilemma.

ect management, factors out these human complications. Yes, we've been taught to fail at large-scale reinvention.

Where the physical sciences focus on answers, Drucker taught us to focus on the questions. In the physical sciences, you get the same answer to the same questions time and time again. In the social sciences, this is often not the case. After a decade of research into revinen- tion, it's clear that there are four ques- tions that need to be continually asked and answered.

Envision: Where do you intend to go and why?

Projects that fail almost never have a single, shared vision among the key stakeholders. When they succeed, this vision is clear.

Design: What do you therefore need to do—and when? Even when companies are clear on their vision and purpose, they can still mess up by overcomplicating things. You need to focus, focus, focus.

Build: How do you best accomplish only what's specified in the design? This requires all stakeholders to use the same project-management process and a common language.

Operate: Who will be responsible for and motivated to do which tasks? A transformational project requires individual accountability and clear motivation. Co-leading cripples projects. And because people aren't robots, key employees need to be highly motivated to accomplish the goal.

It's time to reinvent reinvention by managing projects as people projects, by getting answers to these four questions, asked in the proper sequence and on an ongoing basis.

Jack Bergstrand is founder and CEO of Brand Velocity, a consul- tancy that helps companies improve and accelerate business initiatives. He is a former CIO and CFO at Coca-Cola and author of *Reinvent Your Enterprise*. Contact him at jb@brandvelocity.com.



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Wal-Mart Exploits Facebook Info

The first app from the retailer's new @WalmartLabs unit taps into the social network to make gift recommendations **BY JOHN RIBEIRO**

SOCIAL COMMERCE Wal-Mart has launched an application called Shopycat, which uses information about the interests of Facebook friends to recommend gifts for them that can be bought at Wal-Mart stores and websites.

Shopycat is the first social shopping app from Wal-Mart's recently formed @WalmartLabs unit, which is focused on developing applications for social and mobile commerce.

The lab was set up after Wal-Mart's acquisition of Kosmix, which had developed a social media technology that filters and organizes content in social networks to make it relevant to users.

Shopycat matches users' interests to a catalog that includes products from Walmart.com and other sites, including bookseller Barnes and Noble and gifts store RedEnvelope,

according to a blog post by Anand Rajaraman, senior vice president of Wal-Mart Global e-Commerce and co-leader of the lab. Rajaraman was a co-founder of Kosmix.

Shopycat is now available on Facebook.

The app is based on @WalmartLabs' Social Genome platform that captures the connections between people, places, topics, products and events as expressed through social media, be it a post, a like or a profile update, Wal-Mart says.

A number of companies are turning to social networks to get a better understanding of their customers' interests and requirements.

For example, eBay acquired Hunch, an online platform for customized purchase recommendations. Buyers on eBay are expected to benefit from Hunch's predictive ability to

generate recommendations for items available on eBay based on their individual tastes, the company says.

Wal-Mart is also working on technologies that let shoppers buy products in the aisles and skip the checkout line. For example, the retailer is interested in near-field communication technology for making purchases by phone. But it isn't in a big rush.

"Yes, you can do this. What we've got to figure out is, how do you make that customer experience something really worthwhile," says Venky Harinarayan, who is also a senior vice president of Global e-Commerce at Wal-Mart and co-leader of @WalmartLabs. "These are not technology problems, they are customer experience problems."

John Ribeiro is a correspondent with IDG News Service.

E.U. Wants to Stay Out of Court

ONLINE DISPUTES A new European Commission proposal could prove a boon to online shoppers who have disputes with merchants.

The proposed Alternative Dispute Resolution (ADR) directive is expected to lead to faster, easier and cheaper resolutions of disputes with online vendors. The commission wants to create a single, pan-European Union online platform that allows users to solve contractual disputes entirely online within 30 days—without going to court.

ADR relies on a neutral party such as an arbitrator, mediator or ombudsman. Today, there are more than 750 ADR entities in the E.U., but they're not involved in e-commerce. The European Parliament and the European Council have committed to adopting the ADR directive by the end of 2012. —Jennifer Baker

Google Merges Checkout and Wallet

E-PAYMENTS Google is merging its Checkout and Wallet electronic payment services into a single product that works on both Web browsers and mobile devices.

The company is also in the process of making Wallet the payment tool on Android Market, YouTube, Google+ Games and other Google sites offering e-commerce transactions.

Checkout was launched several years ago as a tool for making online payments via conventional browsers, whereas Wallet made its debut in September as a payment application for mobile phones.

The integration of Wallet and Checkout will be transparent to merchants, the company says.

Google is mostly rebranding Checkout with the Wallet name, not radically ripping out the Checkout system and rebuilding it with a different Wallet design, says IDC analyst Aaron McPherson. —Juan Carlos Perez



Personal technology is changing the enterprise.

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**“What’s the
big deal?
Just put it in
the Cloud.”**

“I think we just
got hacked.”

**“MY LAST JOB
SUPPORTED
IPHONE.”**

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STATE OF

CIO

29

Look inside for exclusive
research about your
evolving business role and
what the future holds.

INSIDE

Survey results Page 31

Cover story:
"Business Disconnect" Page 38



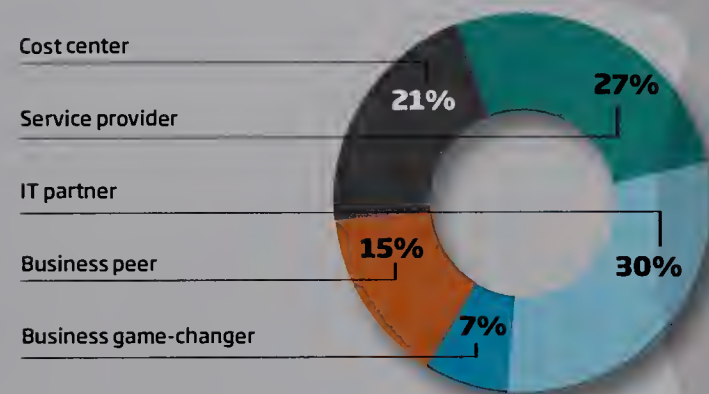
Open the gatefold
to continue

2012

Your Business Role

The Way Others See You

How you think business leaders perceive IT



Strategic Access

Fewer CIOs report to the CEO. Twenty-three percent of respondents now report to the CFO, up slightly from 20 percent last year and 19 percent in 2010.



How You Built Influence

Communication, competency and a savvy staff helped you improve relationships with business stakeholders



Perception Gap

IT leaders and non-IT execs agree on many business priorities, but not on the importance of the following issues

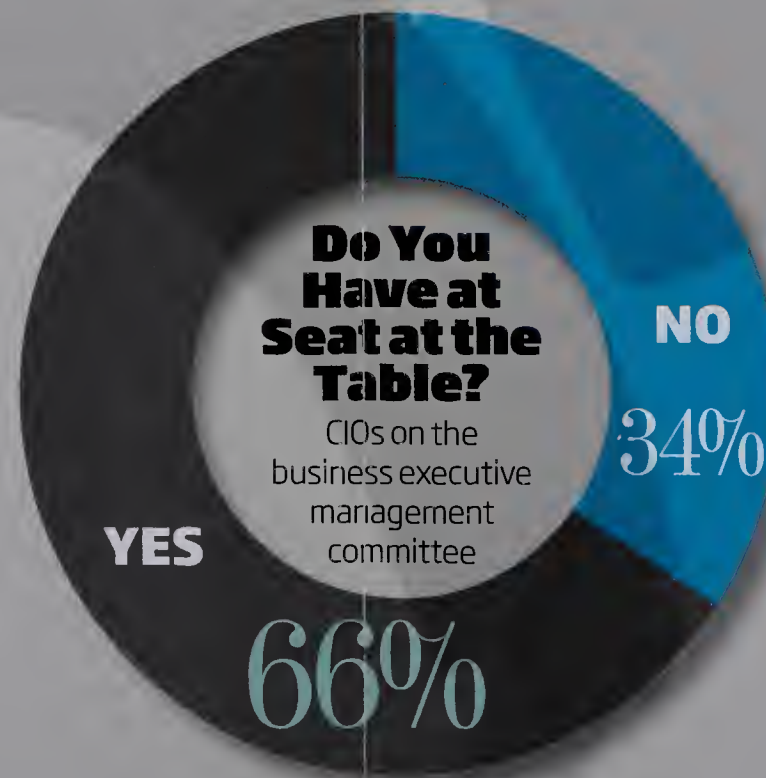
Critical or High-Priority Issues	IT Leaders*	Non-IT Execs**
Competition against your products or services	47%	78%
Rising pressure to reduce costs	62%	84%
Reducing IT operational costs to free up money for new technology development and product or service innovation	60%	44%

* CIO magazine State of the CIO survey, subset of 386 North American IT leaders

** Forrester Research's Forrsights Business Decision-Makers Survey, Q4 2011; base: 377 North American managers outside of IT (a subset of the total respondent base)

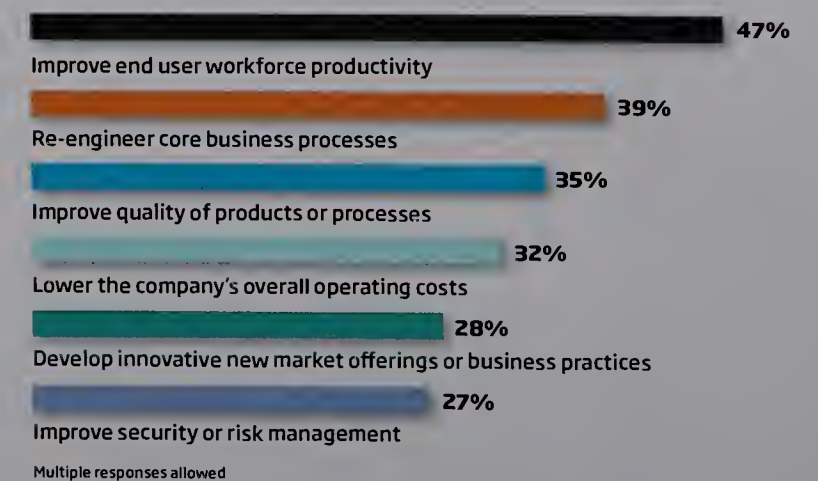
Do You Have at Seat at the Table?

CIOs on the business executive management committee



How IT Makes a Difference

Expected accomplishments in the year ahead

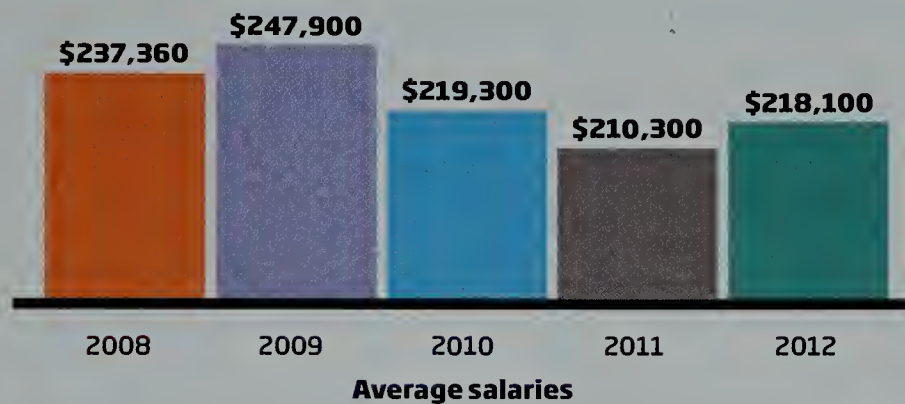


Where You Stand

Your Average Tenure
5 years, 4 months

An Uptick in the Paycheck

Average CIO salaries are higher, but not back to pre-recession levels. IT leaders at large companies earn the most: \$312,800, on average.



The Wide-Ranging CIO

Fifty-seven percent of the CIOs we surveyed are responsible for one or more non-IT areas of the business.

The most commonly added functions:

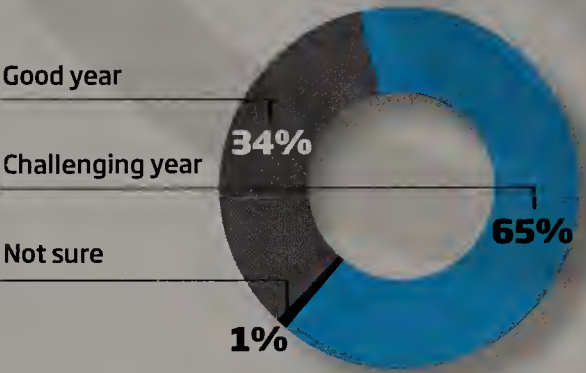
- ✚ Security
- ✚ Strategy
- ✚ Risk management
- ✚ Administration/operations
- ✚ Customer service

20 responding CIOs are in charge of mergers and acquisitions, and 17 are in charge of environmental sustainability.

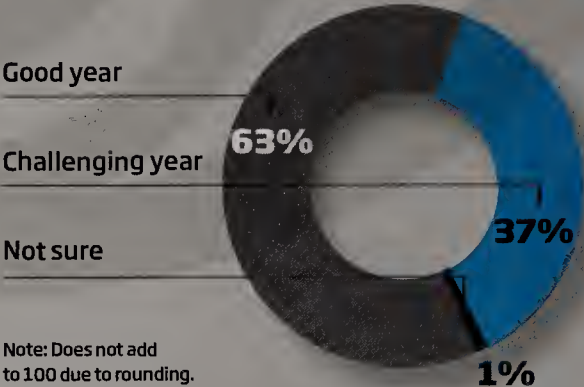
What the Future Holds

The Outlook for 2012

Your organization's business outlook

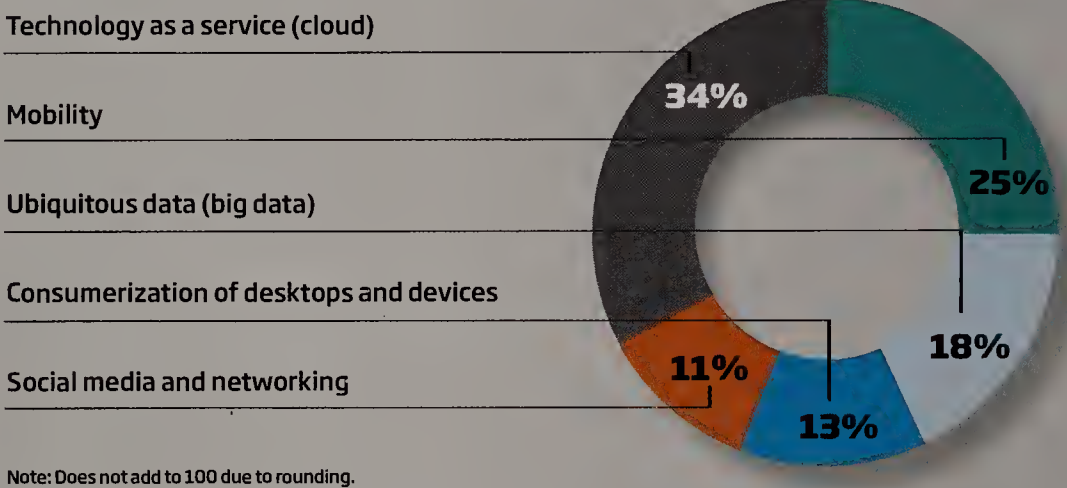


Your IT team's ability to hit its goals



What's Driving Change

You say these trends will have the most profound effect on the CIO role in the future:



What You Want to Do

Favorite ways to spend your time in the next 3 to 5 years:

- Driving business innovation
- Identifying opportunities for competitive differentiation
- Developing and refining business strategy

Least favorite ways to spend your time in the next 3 to 5 years:

- Managing IT crises
- Negotiating with IT vendors
- Controlling costs

“What do you mean
we can’t go wireless?”

“Let’s talk
big data.”

“B.Y.O.D.”



"I can't VPN.
Oh, wait...
just found a
work-around."

"I WAS JUST
LOOKING AT
THIS SAAS
SOLUTION..."

"Our intranet stinks.
Let's just start a
Facebook group."

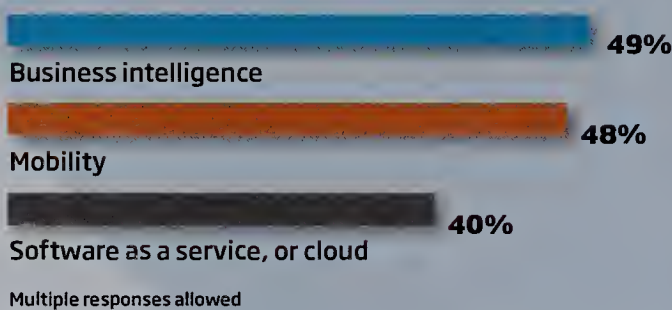
Is your company talking tech? Tweet your
consumerization of IT issues at **#CIOHEADACHE**

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Your Spending

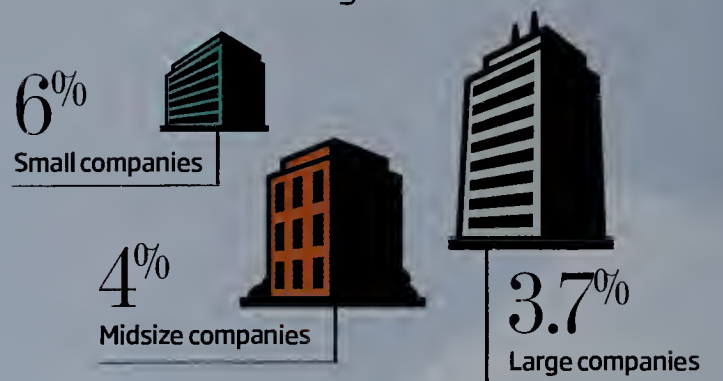
Project Priorities

You're most likely to invest in these technology projects this year:



IT Spending by Company Size

Percentage of revenue



IT Spending by Industry

Industry	IT Budget as % of Revenue
High-tech/telecom/utilities	7.6%
Financial services	6.1%
Average of all industries	4.7%
Healthcare	4%
Manufacturing	2.6%
Retail/wholesale/distribution	2%

EXTERNAL SERVICES Third parties, including outsourcers and cloud-service providers, provide 23% of your IT services today. CIOs expect that number to rise to 35% in the next three to five years.

SURVEY METHODOLOGY

CIO's 11th annual State of the CIO survey was conducted online between Sept. 12 and Sept. 21, 2011. Members of the CIO Forum on LinkedIn and the CIO customer database were invited to participate in the survey. Results are based on 596 respondents who indicated they are heads of IT at their companies or business units. Sixty-five percent of respondents are from North America. The margin of error on a sample size of 596 is +/- 4%. Percentages on questions where respondents could select more than one answer may not total 100. Percentages in other questions may not total 100 due to rounding. References to company size are based on the following definitions: small: less than \$100 million annual revenue; midsize: \$100 million to \$999.9 million annual revenue; large: \$1 billion or more annual revenue. Not all respondents answered every question.

—Carolyn Johnson, research director

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"WE NEED A NEW NETWORK."



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Business **dis**

38

You and your fellow executives have conflicting priorities on cost and competitors, says our 2012 State of the CIO survey

BY KIM S. NASH

At Maple Leaf Foods, a \$5 billion consumer packaged-goods company, IT doesn't just respond to business decisions, it participates in the planning that leads to those decisions. For starters, CIO Jeff Hutchinson sits on the executive committee, and some of his IT leaders sit on business unit committees. In addition, non-IT managers report to the CIO, and several IT staffers report to those managers. The IT group influences what the company does and doesn't do—which plants to close or expand, which acquisitions to make, which customers to cultivate—and a major part of Hutchinson's bonus depends on meeting corporate profit goals.

Being the strategic partner that many CIOs say they want to be means so much more than just having an academic understanding of your company or industry, Hutchinson says. "Be part of the business. Be part of the decisions," he says. "That's different."

This cross-pollinated, matrixed and hybrid business-IT world, however, is fantasy for most CIOs, according to our annual State of the CIO survey.

In its 11th year, the survey uncovers how the role

A full-page photograph of Tim Campos, an IT director at Facebook, standing in a hallway. He is wearing a dark, button-down shirt and jeans, with his hands on his hips. The hallway has a warm, reddish-brown wall and a wooden floor. A small, rectangular light fixture is visible on the wall to the right.

connect

39

Tim Campos, IT director at Facebook, says there's a mismatch between the the available IT talent pool and what the social networking company needs to fulfill its growth plans.

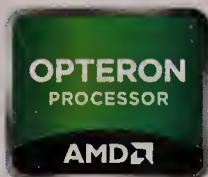


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amd.com/opteron

¹ Based on AMD internal engineering performance expectations comparing 12-core AMD Opteron™ 6100 Series processor with 16-core AMD Opteron™ 6200 Series processor when utilizing the 1 VM per core loading rule.

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VIEWPOINT



Mike Wolfe

CIO, AMD

Last March, Mike Wolfe left his position as Vice President of Product Development and Engineering IT for Hewlett-Packard in Austin, Texas to take up the CIO reins at AMD. Prior to Hewlett-Packard, the University of Texas (Austin) alumnus spent the previous six years as VP of IT for Motorola's semiconductor Business.

What really captured Wolfe's imagination was the challenge of constructing what may be the world's largest high-performance private cloud, spanning more than 124,000 processor cores, and routinely supporting upwards of 40 million engineering jobs per month.

FOR MORE INFORMATION:
Download "The New AMD Opteron™ Processor Core Technology" White Paper at www.cio.com/whitepapers/amd/opteron



Custom Solutions Group

Sweating the Details:

Building a Global Cloud from the Chips Up

In a recent interview, AMD CIO Mike Wolfe explained how he tackled the challenge of rewiring the chip maker's global engineering force by focusing on the details, starting with the use of AMD's newest processor, the AMD Opteron™ 6200 Series, to build a massive high-performance private cloud.

Why did AMD turn to a Private Cloud Architecture?

The idea was to build a private cloud to support our engineering teams, be available anywhere in the world, and solve several key problems.

One problem was that we had data scattered all over the planet, and every time an engineering team wanted to kick off a new project, they first had to replicate the data. So I was paying for a lot of storage, storing the same data over and over again. Also, you can imagine the bandwidth costs for moving that engineering data all around the world.

More importantly, from a business perspective, we were not nimble. It would take us days — even weeks in some cases — to just replicate the data. From a productivity standpoint, we were hampered.

How did the cloud solve that problem?

In the old days, teams were limited to the servers on their site, in terms of their simulation and verification power. But now we can literally reallocate our cloud within a 24 hour period. In one example, we were able to give a particular team 46 percent of the cloud to do their simulation and verification — and normally they were getting just 5 percent. As a result, they were able to get two months' worth of verification done in five days.

That level of burst capacity is really why people are interested in the cloud. Our engineers were never able to get that much done in the past, and you can imagine the impact to us as a company, in terms of time to market.

How did refitting your existing servers with the AMD Opteron™ 6200 Series processors help you achieve this higher level of business agility?

One aspect is AMD Turbo CORE technology, which provides the ability to get up to a 500MHz burst across all cores for multi-threaded and single-threaded applications. The processor can actually shut down half of its cores and give up to a 1GHz boost in throughput to the remaining cores.

These chips also feature a new power state that drops the idle power consumption by up to 46 percent over the previous generation. So if you're running a datacenter where your workload varies, cut your energy consumption without cutting throughput. That's a huge advantage.

We also worked very closely with the virtualization vendors from a software perspective, and part of the chip design process was actually to optimize virtual machine performance on our processor. As a result, we have achieved very low VM overhead. So a few years ago, the questions were, "Can I run a certain application on a virtual machine?" and, "Will it have the performance I need, the throughput I need, et cetera?" I can tell you now: We don't ask that question any more. The question today is, "Why not?"

What does this mean to CIOs?

What most CIOs care about is ROI and efficiency, and the cost of running the business. In my particular case, I have a huge emphasis around lowering the cost of running the business, so I can flip those resources to adding new capabilities, and focus on innovation.

One of the key factors is to increase the level of automation, and get virtualization levels up in the datacenter. Because the AMD Opteron™ 6200 Series processor is so virtualization-friendly, with very low overhead, it helps you achieve that. In addition, because of the energy savings improvements designed into the new processor cores, we're able to pull that cost out of the company. As you can imagine, that goes straight to the bottom line. ■

of the CIO continues to evolve as business and technology change. Our latest data shows that while CIOs have gained strategic influence generally in the past few years, most—57 percent of the 596 IT leaders polled—say they are perceived as a service provider or technology-only collaborator. Another 21 percent say IT is unappreciated and misunderstood as a cost center.

Just 22 percent of respondents say they are viewed as a true peer or game-changer, as in the Maple Leaf model. Those CIOs who identify themselves among the elite see things differently from other CIOs, and not just because they are paid more than other CIOs and enjoy bigger budgets and a smaller staff-to-user ratio. (See “Who’s Above Average?” below.) The elite are more likely to predict a good year ahead, confident they are improving risk management and expecting to invent new IT-infused products and services for competitive advantage.

Among the broader pool of respondents, though, we find a worrisome disconnect between CIOs and non-IT leaders on the importance of key issues: cost cutting and the assault from competitors. CIOs generally consider both lower priorities than their business counterparts do. If you don’t think the same way about money and competition, how can you align with—never mind accelerate or help set—business goals?

Well, you can’t.

“We need to be in lockstep,” says Karla Viglasky, CIO of ITT, a \$2 billion manufacturer. Viglasky, whose career includes stints in engineering and e-commerce, was named ITT’s CIO in November. “I’ve been the victim and the torturer when it comes to IT,” she says. “You can’t gain credibility with the business by saying, ‘I need to help you understand what I do.’ They don’t care. Instead, you prove yourself every single day.”

Part of the proof for the CIOs we surveyed may come from major investments planned for 2012 in analytics, collaboration, mobility and other technologies that reduce the time and space between employees. That’s if they can overcome abiding concerns about enterprise security, as well as about the macro-economic issues of stagnant job growth and the global recession. It’s a tense time, certainly. But CIOs leading through it have devised creative ways to handle these challenges.

Live or Die by Corporate Goals

In addition to our usual State of the CIO research, this year we worked with Forrester Research to survey non-IT executives to get a handle on how their thinking compares with that of CIOs. We found that IT leaders disagree with their colleagues in some crucial areas.

Who’s Above Average?

The most business-savvy CIOs tend to report to the CEO, lead a non-IT area—and make more money

CIOs at companies where the IT organization is considered a business peer or game-changer predict a good year ahead for their organizations, more so than do CIOs not viewed so favorably—48 percent vs. 34 percent.

Perhaps the elite CIOs see something in the economic tea leaves that other CIOs don’t. Or maybe their notably impressive stats make them feel more powerful and in control, no matter what the economy, politics or fickle customers may bring.

This year’s State of the CIO survey finds that peers and game-changer CIOs are more likely to:

- **Report to the CEO: 60 percent vs. 38 percent for the CIOs in the rest of our survey**
- **Sit on the business executive management committee: 85 percent vs. 66 percent**
- **Lead a non-IT area, such as security, operations or customer service: 68 percent vs. 57 percent**
- **Work to improve risk-management processes using technology: 40 percent vs. 28 percent**
- **Have already completed major initiatives in social media (37 percent vs. 24 percent), cloud computing (36 percent vs. 28 percent) and e-commerce or digital strategy (25 percent vs. 16 percent)**

Monitoring the competition climbs higher on the agenda of elite CIOs, with 66 percent of them concerned about that topic, compared to 50 percent of total respondents. They’re more likely to anticipate that innovative new products or processes will be among their team’s most significant accomplishments in 2012 (38 percent vs. 28 percent) and to have initiated new products and services for competitive advantage to cement a good relationship with non-IT colleagues (60 percent vs. 40 percent).

Perhaps it’s a chicken-or-egg situation, but having done all that, elite CIOs enjoy proportionally bigger IT budgets: 5.8 percent of revenue vs. 4.7 percent. Oh yeah, and they make more money, on average: \$245,000, compared to \$218,000 for the rest of the respondents.

—Carolyn Johnson and K.S.N.



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Katrina Lane, CTO at Caesar's Entertainment, says the risk of computer crime is growing, yet that risk is maddeningly difficult to quantify.

About cost cutting, for example, 37 percent of 386 CIOs in North America say rising pressure to reduce costs is a low priority or is not on their agenda. But 84 percent of 377 business decision makers in North America called it a high or critical priority.

Worrying about the competition, meanwhile, is low or no priority for 52 percent of CIOs, while 78 percent of business colleagues view it as a high or critical priority.

This misalignment can result in projects that don't quite produce the results business units want and a lot of meetings trying to figure out why, says Nancy Wolk, CIO of Alcoa, a \$24.6 billion aluminum manufacturer.

Strategic CIOs advise fellow IT leaders to think of themselves as company citizens first, then members of their department. Live the larger goals of the company, they say. No one's advocating any Manchurian candidate brainwashing, but a little rhythmic meditation on the corporate objectives while lining up at Starbucks every morning couldn't hurt.

Wolk suggests coming up with a simple test to sort ideas. "We think of everything we do in terms of, Does it help us grow or help us generate cash?"

An upcoming project to provide the sales staff with mobile dashboards about customers will help Alcoa grow, she says. Green light.

A proposal to pilot collaboration tools for problem solving and innovation might boost productivity but is a step or two removed from company growth. It goes into the queue, but further down.

At ITT—one of three companies created by a spinoff plan executed by a company of the same name on October 31, 2011—senior leaders have set an objective to provide a premier experience to customers, Viglasky says. IT can then find the points at which the customer connects with the company to see how technology can make those interactions faster or more enjoyable, or both, she says. Upgrading customer-facing systems makes the agenda, as does a pilot of iPads for staff that serves customers.

One way to internalize the corporate goals quickly, says Hutchinson at Maple Leaf Foods, is for the IT group to keep close to sales and marketing. Those departments are at the forefront, with much of their compensation riding on how cheery they can make the CEO and CFO.

Going Through Labor Pains

Whether a company can achieve its strategic goals depends on whether it can get the right people into the right positions. Staffing, however, is difficult both inside and outside IT during this skimpy and jobless economic recovery. Many companies don't have money to hire. Some that do are finding a mismatch between what they want and who's available.

Fifty-seven percent of CIOs are concerned that stagnant job growth will hurt their organizations, and that figure climbs

to 69 percent when looking at just the respondents in North America.

One problem is that people are stuck, explains Katrina Lane, CTO at Caesar's Entertainment, an \$8.8 billion casino company.

As the rough economy curbs home sales, the workforce becomes less mobile, Lane says. She'd like to hire senior IT staff in various disciplines but has had challenges in finding talent.

"They can't get rid of their houses, and you end up having a smaller pool of people to draw from," she says. Caesar's has major offices in Las Vegas, with additional staff in Reno, Nev.,

"We think of everything we do in terms of, Does it help us grow or help us generate cash?"

-NANCY WOLK, CIO, ALCOA

45

and Atlantic City, N.J., and teams at each casino, which has helped. Still, she's learned to screen candidates early to find out whether it's realistic for them to relocate.

Tim Campos, director of IT for Facebook, worries more about the hiring plans of the customers of the \$6.3 billion social network. Companies that can't hire the right people won't grow and so won't advertise as much on Facebook, he says.

But like Lane, Campos also has trouble filling some jobs. The company, which has 800 million active users, has grown from just a few co-founders in 2004 to more than 3,000 employees today. "We can't hire fast enough," he says. (See "Facebook Spreads East," Page 20.)

Software engineers, data analysts and strong all-around IT managers are high on his list of wanna-gets. Although company headquarters is in Silicon Valley, "It's still very difficult for us to find the best talent. There's a mismatch in what's available and what we need to grow," he says, adding that Facebook also competes with other technology companies for "people who can make a big impact."

Facebook leaders decided that a prime differentiator for the company is its talented employees, which crystallizes IT's mandate: Make hiring easier, make hiring more efficient, make new employees productive sooner.

The IT group is the first department new employees meet on their first day, during an on-boarding process that takes no more than 45 minutes. Their workstations, computers and other devices are already set up; IT teaches them how to access the data and applications they need.

If employees need new accessories, such as a keyboard, mouse or power supply, they can swipe an ID card at a vending machine that dispenses equipment. Campos doesn't want to make people submit to a long procurement process for simple requests. The vending machine cuts overhead while still tracking technology costs, he says.



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The Tech Agenda

As 2012 unfolds, companies plan to complete major initiatives using technologies that they expect will change the role of CIO, according to our survey. These include analytics, cloud, mobility and social media. But the effect of these technologies will vary by company. As part of the mission to provide top customer service at Alcoa, for example, Wolk is experimenting with visual analytics. That is, she's providing sales, marketing and other employees with desktop and mobile applications that graphically depict trends and information about customers.

Charts, graphs and perhaps animation will eventually show items such as contract details, orders in process, and sales volume compared to forecasts. Visual analytics will make employees more productive, Wolk says, because people can get meaning more quickly from pictures than from lists and numbers, especially on the small screens of mobile devices.

At Restaurant Technologies, a privately held restaurant supply company, IT is branching into revenue generation with services that use data collected from sensors and other technology built into kitchen equipment. For example, the company can monitor how often the 17,000 restaurant locations it serves, including 8,000 McDonald's locations, filter the cooking oil in their fryers and use that information to recommend the most efficient practices, says Randy Witt, director of IT.

Restaurant Technologies was bought in 2011 by a European private equity firm, which is pushing it to expand both geographically and in the number of data-focused services it offers, Witt says. Two new project managers are leading development, and Witt has hired two business analysts and is seeking a third.

Insecure About Security

Beneath these project plans lies a pervasive anxiety about security. In our survey, 69 percent of CIOs say they expect a security problem to hit their organizations within the next three years. As society grows ever more connected, threats can propagate fast. As companies use more mobile and cloud technology, data constantly moves and becomes harder to protect.

"How you architect, how you choose to leverage the cloud, how you implement applications [all illustrate how much] enterprise security is becoming a significant issue for CIOs," says Facebook's Campos.

The primary reason Allergan has moved cautiously towards cloud computing, says CIO Sue-Jean Lin, is risk. The \$4.9 billion pharmaceutical company must comply with hundreds of government rules and regulations, and Lin wants a cloud vendor to be fully compliant with security standards and applicable regulations governing the pharmaceutical industry. She isn't satisfied with what she's seen so far. "The basic principles behind cloud computing make sense," she says. "But we can't ignore compliance."

Computer criminals are more professional and organized than ever, so the risk is bigger but maddeningly difficult to quantify, says Lane at Caesar's Entertainment. As a result, deciding how to handle security involves more assumptions than some CIOs feel comfortable with. Analyzing the risk isn't as straightforward as planning for server downtime, for example, because reliable data on scary scenarios doesn't exist, she says.

"We care immensely about protecting company secrets and customer data. With a server outage, I have years of data to draw

"The basic principles behind cloud computing make sense. But we can't ignore compliance."

-SUE-JEAN LIN, CIO, ALLERGAN

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on when I judge which technologies to use," she says. "But this is: We think the current status of the hacker world is X and therefore, we think Y. It's very hard to know."

Restaurant Technologies outsources most of its security, at least for now. The company is small, with a staff experienced in many technology realms, but not security, Witt says. A consultancy monitors for intruders and performs penetration tests, among other services. The company is also helping Witt's staff develop security policies and practices, with an eye toward the day, perhaps within two years, when Restaurant Technologies will bring security in-house. "This is instead of trying to figure it out on our own through trial and error. Those would be pretty unpleasant errors."

Cut Costs, Gain Efficiencies

Seventy-seven percent of the CIOs we surveyed hope that helping their colleagues understand IT will produce positive results for the IT group in the next three years. Yet our data suggests that a fair number of CIOs aren't making the effort to build relationships with business peers: 43 percent say marketing the IT department so that the business has a better understanding of IT's capabilities and processes is a low priority or not a priority at all.

There's no doubt that IT contributes to corporate growth by, for example, finding new streams of revenue with technology-enhanced products, like at Restaurant Technologies. But colleagues generally expect IT to reduce costs, says Khalid Kark, a Forrester analyst. "You should not lose sight of that. Business considers it hugely important," he says.

them, Aguiar says. The LifeRay open-source software at the heart of Ogilvy's new collaboration system saves the company money compared to buying Microsoft's SharePoint or some other commercial product. The virtualized servers on which it runs reduce up-front hardware costs while providing more power and quicker time to market, he says. But virtualization also decreases depreciation costs over time, a factor that should be figured into any calculation of IT expenses for the project, he adds. "Maybe now I invest that in [hiring or training] a business analyst," he says.

Many CIOs don't want to be seen as the "no" guy who turns down lots of requests for reasons that are mysterious to the asker, such as cost, Kark says. That's why at Facebook, for example, Campos likes to show employees some IT costs, such as telecommunications bills. Cell phone service is one of Facebook's biggest technology expenses, and he provides reports that chart how much each person racks up compared to the rest of their department. In those IT vending machines, each piece of equipment carries a visible price tag.

"That awareness drives costs down in a way that doesn't impact IT's service," he says. He's glad not to have to police every penny. "Instead, I empower employees to make the right decisions."

CIOs continue to progress toward an ever-more-strategic role in many ways, including, as this year's survey finds, by delegating more of their operations to trusted lieutenants; 46 percent of CIOs say they are doing that, up from 35 percent last year. Also, CIOs are aligned with non-IT business managers in their view that rising regulatory requirements and government involvement in the economy are high, even critical, priorities. Similarly, they agree that so is sorting out what the accelerating rate of technology change will do to their own company's products and services.

But overall, progress is uneven. For example, according to our survey, fewer CIOs now report to the CEO, a metric typically used to estimate CIO influence. Thirty-eight percent of CIOs this year report to the CEO, down from 44 percent last year and 43 percent the year before. Few CIOs call on customers as they try to improve relationships with business stakeholders—just 23 percent, up only slightly from last year's 18 percent.

That, of course, makes Maple Leaf Foods all the more notable. Hutchinson says he and his IT staff spend as much time figuring out what customers are doing as they do learning about the competition. The CIO of one of Maple Leaf's biggest customers happens to have an office near Hutchinson's, and the two get together regularly to talk technology and business, he says.

And so successful are Hutchinson's efforts to cross-pollinate IT and business units that when one of his technology managers didn't attend a business-side meeting recently because of a scheduling conflict, Hutchinson got a call.

"The president of the business unit says, 'I'm mad at you because your person is in your meeting, not mine,'" Hutchinson says. "It's happened in a couple cases. That's how I know this is right. This is working." **CIO**

Contact Senior Editor Kim S. Nash at knash@cia.com. Follow her on Twitter: twitter.com/knash99.

"It's still very difficult for us to find the best talent. There's a **mismatch** in what's available and what we need to grow."

—TIM CAMPOS, IT DIRECTOR, FACEBOOK

But the mandate isn't necessarily to slash spending and, thereby, IT services, says Yuri Aguiar, CIO of Ogilvy and Mather, a privately held global advertising firm. One CIO's cost is another's efficiency.

It's not semantics. There's real math involved. Expenses may hold steady, but if IT can provide more server power, say, or a better way to collaborate with coworkers for the same amount of money, that's a gain in efficiency, Aguiar says. IT is not spending money it might otherwise have had to spend.

The next step is to quantify the efficiency gains and share

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The Android Conundrum

United Orthopedic wants a device-agnostic mobile strategy, but finding the right fit remains a puzzle **BY MICHAEL YBARRA**

Medical technology moves at warp speed, and trying to wring back-office benefits from the latest gadgets can be tricky in a field governed by strict privacy regulations.

Consider United Orthopedic Group, a holding company whose 25 subsidiaries make braces and medical devices for virtually every part of the body, from head to toe. Patient health information (PHI) needs to be transmitted to the main office, but its clinicians work remotely in 22 states. CIO James Clent says mobile devices have been challenging to deploy because of HIPAA privacy requirements, not to mention the limitations of various devices.

Ultimately Clent, like many CIOs, prefers a device- and hardware-independent platform. Last year the company tested an Android-based smartphone strategy it hoped would be a speedy alternative to evenings spent faxing hundreds of pages of patient information to the main office. Clent felt Android would provide a better level of security, "and you don't completely hang your ▶▶▶

James Clent, CIO of United Orthopedic Group, had high hopes for his company's Android phone pilot. But network tags raised unexpected compliance concerns.



PHOTO BY CHARLES FORD

success on a single vendor. That gives me peace of mind. I don't have to worry about every upgrade from a single vendor," he says.

During the pilot, the phones were used to scan billing documents, which were encrypted and transferred to the company's database without staying on the mobile devices. Clent estimated the equipment would pay for itself in nine months and collection speed would improve nearly 10 percent. It didn't work.

As it turned out, there's a trade-off between upload speed and image quality. With a lapse of almost a minute between scans, there was always the chance a transmission would fail and confidential documents would remain stuck on the device. The issue was fixable on 4G networks but not on 3G ones, which made the project impractical. "We absolutely do not want PHI stored on a phone, nor do we want to have the possibility of failed transmissions," Clent says.

Clent has moved on and recently launched a pilot program to run VMware View to allow remote desktop access on iPads and Android tablets. "The beauty of this is that no PHI or any other data is ever stored on the device itself, while allowing full access to applications and data within the enterprise firewall," he says.

The new pilot does not solve the faxing issue, but does streamline remote workflow by safely transmitting clinical notes and enabling real-time appointment management, while GPS allows route planning and optimization. "The business benefit is immediate access to data and eliminating unneeded travel," Clent says.

The fact that United's tablet pilot supports both Android and Apple devices underscores a trend toward flexibility among CIOs and Android's rising dominance in the mobile market. In 2011, for example, a Forrester Research survey found that the percentage of enterprises supporting Android devices had almost doubled from the previous year, hitting 28 percent, up from 16 percent.

"Android's made a pretty big jump," says Forrester Research Principal Analyst Michele Pelino. "The openness of the Android platform is appealing to users. With closed environments, you have to go through their store and follow their requirements. Many organizations want the flexibility to use different devices and platforms. One platform isn't a reality in many organizations these days."

Michael Ybarra is a freelance writer based in California.

Can Windows Play Nice With the iPad?

BY TOM KANESHIGE AND LAUREN BROUSELL

All those iPads racing into the enterprise must maneuver around a tricky corner: getting Windows desktop apps to run without wrecking the user experience. Sure, Citrix's virtual desktop infrastructure can render entire Windows desktops and their apps on the iPad—but not always very well.

The Problem: Windows desktop apps were never meant to run on a 10-inch touchscreen tablet with no mouse or physical keyboard. Yet workers need these apps to do their jobs. At hospitals across the country, for instance, clinicians depend on the Cerner medical app, which doesn't work well on the iPad. Then there's the plethora of custom-built Windows apps that companies have invested time and training into and often require a virtualized desktop environment to run on an iPad.

CIOs, such as Wyndham Vacation Ownership's Tina Rourk, argue that Windows apps running in a virtualized environment on an iPad won't cut it everywhere. "We want to be device agnostic," says Rourk. "That's the ideal state. But there is more to think about than just the Citrix component. UI and functionality still has to be designed for touch-type devices."

For now, employees use Citrix on the iPad as a last resort, CIOs say. This is one of the reasons Seattle Children's Hospital is keeping iPads at bay. "The EMR [electronic medical record] apps are unwieldy on the iPad," says CTO Wes Wright.

What Can Be Done: Benjamin Baer, senior director of product marketing for Citrix's Receiver and Gateways group, says he is aware of the usability problem. While Windows app developers ultimately have to step up and retool their Windows apps for the iPad, Baer thinks Citrix can offer an improved solution.

"Most people would rather have access to their Windows apps, not necessarily the entire desktop," says Baer. "Citrix recently announced a new software developer kit that allows end users, customers, system integrators and partners to write extensions that reformat the actual Windows app to be more native to the device it's running on. It also allows developers to leverage things like GPS, accelerometer, cameras."

"For example, Outlook was never designed for those form factors," says Baer. "But we can actually re-screen the Outlook interface to look more like a native app: bigger buttons, screen wipes. We expect a lot of our independent software developers to really leverage [this] and change the way their traditional Windows apps are viewed through Citrix Receiver."

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LEGAL AFFAIRS

Online Gripes? They're Protected

Labor board says businesses can't fire employees who complain on social media about working conditions **BY GRANT GROSS**

Executives considering disciplining employees who complain about their working conditions on social media such as Facebook or Twitter may want to reconsider after a series of recent opinions from the National Labor Relations Board (NLRB).

The NLRB, a government agency focused on protecting worker rights, has ruled against business owners in several recent cases involving the firing of workers who discussed their work environment with fellow employees through social media outlets.

The agency's position is that the National Labor Relations Act protects most discussion of work conditions among employees, including complaints about supervisors, even at non-union companies. Online discussion of work conditions falls under that protection, says Tony Wagner, a new media specialist at the agency.

A key caveat: The NLRB hasn't given employees free rein to whine about their jobs. The complaints must be in the context of employees talking with each other, or talking on behalf of other employees. If an employee posts his

gripes to Facebook friends without other coworkers participating in the discussion, then the complaint generally isn't protected by the NLRB, Wagner says.

NLRB determinations of protected worker speech are "very contextual," he says.

Still, the protection appears to be fairly broad. Businesses that have social media policies prohibiting employees from discussing work conditions with each other online may violate NLRB rules, Wagner says.

In August, NLRB staff issued a report on 14 recent cases involving social media. The agency found that four employers had illegally fired workers for using social media, and three employers had created overly broad policies banning employee use of social media.

"The board has allowed the use of some profane language toward supervisors and others," says William Finegan, an employment lawyer in the Fulbright and Jaworski law firm. However, physical threats or harassment are not protected, he says.

Grant Gross is a correspondent with IDG News Service.

London IT Pros Prep Systems for Olympics

While London's massive Olympic park is still a frenetic construction site, IT engineers are fine-tuning the systems that will be used to transmit scores, to let athletes send email and to transmit high-definition video of the games.

The Olympic Games are set to kick off July 27 and will be followed by the Paralympic Games. Test athletic events are already under way to evaluate the resiliency of high-speed data networks.

In a skyscraper in London's Canary

Wharf financial district, Olympic organizers recently opened a Technology Operations Center (TOC) for monitoring the health of Olympic IT systems. More than 400 people can work in the TOC, monitoring athletic events and managing a trouble-ticketing system for when an IT problem crops up. During the games, the TOC will monitor 94 competition and non-competition venues.

On a recent visit, the TOC was abuzz with activity. A large flat-screen TV in the front of the room broadcast that there were no "Sev 1s," or IT problems of the worst kind.

Incidents in that category might include a failure in the replication of data across storage arrays, says Michael Trainor, a service project

manager for Acer, a key hardware vendor for the games. Acer is providing 11,500 desktops running Windows 7, 1,100 laptops and 900 servers, as well as storage systems and monitors.

The ultimate goal when the games kick off is for technicians to simply be bored. To do that, they're being as risk-averse as possible, Trainor says, including keeping the main network isolated from the greater Internet.

Systems integrator Atos is developing Olympic-specific software applications that will run on the Acer machines, such as the Commentator Information System, which feeds nearly instantaneous results to broadcasters and journalists.

—Jeremy Kirk

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Soft Skills Are Important, Too

Hard times require leaders to be more open and engaged

BY MADELINE WEISS AND JUNE DREWRY

The old adage that “the soft stuff is the hard stuff” certainly applies to CIOs. Consider the many new ways we work together today as companies adopt global shared services, enterprisewide architectures and systems, and entirely new business models that arrive in mergers and acquisitions or outsourcing arrangements. All this requires finely honed skills in transformation and transition.

In a recent meeting of Society for Information Management’s Advanced Practices Council (SIM’s APC), we explored the key lessons learned by successful CIOs with track records of leading company transformations. Some tried-and-true tactics emerged, including:

- Set up a team to guide people reluctant to change.
- Have a compelling vision or purpose to share.
- Engage both the rational and emotional sides of your staff.
- Target and measure desired outcomes.
- Foster ownership, commitment and idea sharing.
- Make two-way communication “relentless and boring.”
- Build credibility and momentum with quick wins.

Let’s focus here on the three techniques most likely to fall outside your comfort zone:

1) Have a compelling vision or purpose to share.

Cutting costs and increasing revenue aren’t compelling to staff in the same way a visionary goal can be. NASA’s vision, for example, extols the value of revealing the unknown “so that what we do and learn will benefit all humankind.” PepsiCo distills its corporate goal down to “creating a better tomorrow than today.” Pharmaceutical giant Pfizer dedicates itself to “humanity’s quest for longer, healthier, happier lives.” What does your organization’s vision say to employees? All too often, CIOs create vision statements focused only on IT’s role in the company. Redirect that vision to connect more directly with a noble cause that will motivate extraordinary efforts.

The most successful CIOs share as much info about change as they can, as early as possible.

2) Foster ownership, commitment and idea sharing.

Several APC members have used “innovation jams” to get staff to generate fresh solutions to long-standing problems.

One CIO recommended getting staff involved in any transformation plan as early as possible to avoid setbacks later on. Chubb’s Chief Architect Patrick Sullivan, for example, engaged the company’s highly independent business unit architects (with patience and persistence) as he engineered the transformation to a corporate enterprise architecture. CIOs can play a central role in times of change

by asking staff at all levels to identify barriers—impediments in structure, attitudes, systems, styles, processes, performance measures, incentives or rewards—and then work together on busting them.

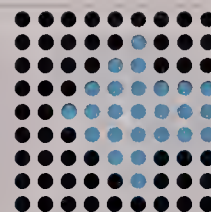
3) Make two-way communication “relentless and boring.”

Former GE CEO Jack Welch advocated this for leaders communicating about change. We know how much time-pressed, overcommitted CIOs dislike “wasting time” by repeating what they have already said. But people hear your message only when they’re ready, so CIOs must not only communicate messages many more times than they might like but must also do so in multiple formats. That means writing blogs, holding breakfast and town hall meetings, sending weekly emails, broadcasting videos and chairing panels of company leaders. This is one area where you can never overdo it.

The most successful CIOs share as much info about impending change as they can, as early as possible. One CIO we know shared every decision about a major outsourcing with staff within 48 hours, thus building trust. Another senior IT leader leapt to his feet at a town hall meeting where a major organizational change had just been announced and declared, “I’m so excited and I’m so scared.”

The soft stuff really is the hard stuff. But it’s worth it.

Madeline Weiss is director of the Society for Information Management’s Advanced Practices Council (APC). June Drewry is former CIO of Chubb and a contributing adviser to the APC.



Beyond Flash

Adobe doubles down on digital creativity tools to help businesses improve their online presence **BY JOAB JACKSON**

THE PITCH

Adobe President and CEO Shantanu Narayen says the company will focus on providing software and services for creating, managing and marketing digital media. "Every business must rethink their online presence, making it more dynamic and more social," Narayen says.

The company already has a market-leading set of tools for digital creativity, including Photoshop, Illustrator, Dreamweaver, Flash and InDesign. Adobe's Flash platform for rich Internet applications gets the lion's share of media attention, but actually "the majority of [Adobe's] revenues [come] from commercial products like Photoshop and Creative Suite," says Charles King, principal analyst at Pund-IT.

Adobe has been aggressively moving its software onto portable platforms such as tablets and offering its software as cloud services. Adobe LiveCycle Managed Services already offers hosted workflow software, and Adobe Creative Cloud is expected to go live in early 2012.

THE CATCH

"Adobe is a company that is in transition in several parts of its portfolio," says IDC analyst Al Hilwa. Perhaps the biggest challenge Adobe faces is with its Flash multimedia platform, acquired when it purchased Macromedia in 2005. Flash is installed on over 98 percent of the world's desktop computers, but the World Wide Web Consortium has developed a set of HTML5 standards that emulate much of Flash's functionality, allowing developers to build rich Internet applications that don't require the Flash plug-in.

In November, the company said it would stop developing Flash for additional mobile platforms and instead focus on developing cross-platform HTML5 tools for these devices (the company will continue to develop

Flash for desktops, however).

Adobe is admitting defeat with Flash, argues Jack Gold, of analyst firm J.Gold Associates. The success of Flash depends on it being available on all consumer platforms, thus allowing developers to build their apps only once. But maintaining cross-platform compatibility was easier before the current proliferation of smartphones and tablets.

As Adobe pivots from Flash to HTML5, it also must play catch-up in the enterprise market. "One thing Adobe does well is embracing design and creativity," notes analyst Irina Guseva at Real Story Group. "One thing Adobe doesn't yet do well is sell enterprise software."

THE SCORE

Despite market turmoil, Adobe is in a

THE COMPANY

Adobe Systems

Headquarters: San Jose, Calif.

Employees: 10,000

2010 Revenue: \$3.8 billion

CEO: Shantanu Narayen

What They Do: Adobe offers software for creative tasks such as editing photos and drawings, designing magazines and other printed products, and creating rich Internet applications. The company also has enterprise software for Web content management, Web traffic analysis and workflow.

good position to offer premium tools for digital media. "As HTML5 takes off, Adobe is in an enviable position to leverage it with its upstream Creative Suite assets, which are used to create the graphics and images that make the Web what it is," Hilwa notes.

Moreover, Flash is far from dead. "Flash is a mature platform, while HTML5 is still in its early stages," King says. "Flash remains the audio-video platform of choice for browsers. That's crucial for developers who, after all, make a living by reaching the broadest possible audience."

On the HTML5 front, Adobe has released a preview edition of its HTML5 editor, which is called Adobe Edge. "Ultimately what matters is not the technology, but what you can do with it," says Arno Gourdol, director of engineering for Adobe Flash. "We will have the best HTML5 tools in the world."

Joab Jackson is a correspondent with IDG News Service.

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At Emory University, Deputy CIO **Brett Coryell** is looking for practical strategies for enhancing staff skills without increasing headcount

SOUNDING BOARD

Solving the Skills Puzzle

SCENARIO We are just finishing a two-year redesign of our job families, and we're now ready to look at other support structures that help lock in both technical and soft skills. I have a variety of pilot mentorship programs and am starting two summer projects to create a development activities guide and an improved onboarding program. The last piece in the puzzle is an experiential job rotation program for my 300 staff and managers. For staff, rotating to a different job for a set amount of time could let them practice new skills and get a realistic preview of what a new job would entail. For managers, job rotations would give them greater appreciation for the challenges of other parts of IT and foster more efficiency when working across teams.

To keep things simple, I'm planning to keep the rotations within my IT department, which is still large enough to have dozens of different jobs. The current sticking points are the many logistical considerations to making this kind of a program a reality, such as back-filling positions, finding the optimal length of a rotation, and differentiating the staff- and manager-level programs. After we have an IT job rotation program in place, I want to consider additional experiential learning opportunities. ►►►

The CIO Executive Council is a global peer advisory service and professional association of more than 500 CIOs, founded by CIO's publisher. To learn more, visit council.cio.com.

ILLUSTRATION BY ANASTASIA VASILAKIS

JULIE SOKOL, SVP OF I.T., THE IRVINE COMPANY

PROVIDE A SAFETY NET FOR TRYING NEW ROLES



ADVICE We rolled out a career matrix last year that highlights every existing and potential position in IT. It maps to a competency model that defines skills that are required for each role in the matrix. One way that staff can expand their skill sets is through position transfers to a different role on the matrix. For example, a desktop technician may move into a business analyst position, or a business analyst may opt for an internal audit role. Between three and five people participate annually. This model differs from job rotation in that it is not a formal rotation program and people are not required to return to their original position. If the new role is a good fit, they can remain there. However, if after an agreed-upon amount of time the staff member decides to return, their old job (or a similar one) will be waiting. The key thing to remember is that no one is penalized if the transfer doesn't work out, and the individuals end up with the job that is the best fit for them.

Our program is for staff, not managers. I expect managers to proactively come to me if they want a new opportunity. Moving managers outside of their immediate role is much more specialized to the individual when they are executives, so we handle these individually rather than with a formal program. Other ways that I encourage learning opportunities is by sponsoring cross-team innovation days where members of the IT department self-select into teams to innovate and improve business processes.

JOEL SCHWALBE, SVP AND CIO, CNL FINANCIAL

TIE ROTATION TAKEAWAYS TO PERFORMANCE REVIEWS



ADVICE I strongly believe that rotational programs must extend beyond IT. You need to incorporate the business and forge strong relationships. If you don't, you are going to be missing a lot of opportunities to be viewed as a solution-oriented shop. I have all of my staff participate in our business sensibility program—a yearlong mentorship with a business peer—as a required objective in their performance reviews.

As a part of the experience, the IT participant is also required to identify and introduce a new process enhancement or solution. For example, one mentor had a manually generated report that was taking him up to 90 minutes per day to run. The protege brought the problem back to IT, and today it's an automated process that eliminates the manual time and effort and needs no additional work on the business analyst's part. I have great buy-in from the business unit leads for the program. One of the things that's really impressed me is the level to which mentors have driven the protege experience: giving out reading assignments, asking specific follow-up questions and really taking it seriously. Mentors see the value of building strong relationships with IT staff and how technology can be used to meet business needs.

As for the length of the rotation, I would suggest trying a month. I don't think you need to be fully immersed in the role to bring back expertise to your original position. This also helps with backfill questions, since it's much easier to cover a role with internal staff for a one-month interval.

TAKE Note

Optimizing Reorganization

CALL IN CIOs are no strangers to restructuring their IT organizations to create greater value for the enterprise. This month's CIO Paradox column (Page 60) looks at how to do this without alienating your IT staff, confusing internal users and business leaders, or breaking working processes and relationships. To learn more—and to have a chance to discuss your own efforts with others—join the Council's February webcast with Martha Heller and a panel of CIOs who have learned important lessons about the right way to reorganize. This webcast is part of the Council's regular series focusing on different aspects of the CIO Paradox. council.cio.com/WEB0112

The CEO View on Intelligence

WATCH In these three online videos, Blue Cross Blue Shield Association CEO Scott Serota and CIO Doug Porter discuss why business intelligence is so important today to healthcare insurers, providers, physicians and patients. They also discuss why Serota chose Porter to bring the association's Blue Health Initiative company to life, and the new role that CIOs and IT must play as the healthcare industry continues to reform. These are part of a series of Council video interviews where CEOs and CIOs at top companies talk together about their partnership and the transformational value that IT is driving in their business. council.cio.com/CEO0112

Benchmarking IT Investment

DOWNLOAD "Who is doing what, with whom, for how much and for what result?" These are the very practical questions that the CIO Executive Council's new Peer Intelligence benchmarks are intended to answer. The benchmarks in this download are the initial set of real-world numbers provided by Council members and the vetted IT leaders from the CIO Forum on LinkedIn. The data will be updated quarterly, so make sure to take the survey linked in the document, add your initiatives and request updated data. council.cio.com/DL0112



Ian Patterson, Scottrade CIO, and Joe Pope, Scottrade Bank President

SCOTTRADE

Relationship Banking

A new retail banking experience tailored for brokerage clients required a tight IT-business partnership

Ian Patterson Started in 1980 as a discount brokerage, Scottrade has now evolved into a financial services firm providing a variety of products helping millions of people manage their own trades and investments. We employ more than 3,600 associates in over 500 offices. As part of this evolution, in 2010 we began offering retail banking services to our brokerage customers.

Joe Pope Banking done correctly provides a tremendous amount of stability. We have no control over how frequently our customers trade in good or bad markets. That creates earnings volatility. Banking is a more predictable earnings stream, and it levels things out for us. In just three years, we've become one of the country's top 100 banks in total assets. We

achieved that with only 15 full-time bank employees because we leverage the people, processes and IT of Scottrade. Ian was extremely hands-on from the very beginning, and really focused on the customer experience.

Patterson Online brokerage clients have an expectation of speed and performance that typically online bank-

ing clients don't have. We wanted to give the same type of speed and performance in banking that we have in brokerage and to make it seamless. You only have to log on once to use both services, even though they are on separate platforms. You see them as simply moving between pages.

Pope That was a huge technological hurdle to overcome. Another was funds transfer capability—we had one system that wanted to account for transfers on a batch basis and another system that wanted to account for them in real time.

Patterson There were regulatory and audit issues as well. The team looked at all the ramifications from a business perspective, determined what it would take to make it work technically, and came up with a great marriage.

Pope If we didn't have a true peer-to-peer relationship, I don't believe we could have built the customer experience that we have. By contrast, we have a third party that provides the basic banking platform, and that is very much a service provider relationship. Thanks to our relationship, we were able to create that customer experience in spite of that provider.

Patterson The difference is that we don't look at IT as a cost center at Scottrade, we look at it as a value provider. It's hard to be successful when you're only driven by what costs you are taking out of the organization day-to-day. You have to be looked at as a peer and partner with the organization, dedicated to making it all work.

As told to CIO Executive Council VP Rick Pastore. View a video interview with Scottrade's CIO and Scottrade Bank's President at www.enterprisecioforum.com.

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Calming the Chaos

IT reorganizations are happening everywhere, and leaders must make that change easy for staff and their companies to accept **BY MARTHA HELLER**

When I interview candidates for positions I've been hired to fill, I typically ask them to whom they currently report. I cannot tell you how often they respond, "That depends, what day of the week is it?" IT professionals are as likely as anyone to invest a tremendous amount of meaning in their titles, their headcount and their reporting lines, and CIOs who reorganize too often (or poorly) are in danger of losing talent. The CIOs below have found ways around that.

When Schneider Electric moved to a global operating model, Senior VP of IT Regions Frederic Chanfrau and his peers reorganized IT into functional domains. While in the end the model worked, they faced some challenges first. "We created artificial silos and broke down local management," he says. "People were unhappy because they no longer reported to their local boss. It was very confusing."

There was also confusion in the business, Chanfrau found. "When the country manager in one country had an issue with IT, he did not know who to talk with." Finally, the new model had too many management layers for decisions to flow easily.

So, Chanfrau and his leadership team reorganized again, this time considering the lessons they'd just learned. In addition to reducing nine layers of management to six and re-implementing some local management structures, they took a new approach to role definition.

Define the roles up front. From Schneider Electric's CIO down, each management layer had three weeks to discuss and define the roles of next layer down. "You don't want people at the top making staff allocations that may not work on the ground," Chanfrau says.

When Jerry Flasz became CIO of Coty in September 2010, he reorganized IT to align to Coty's geographical footprint and to its go-to-market strategy. "I wanted the IT organization to focus on the business, with closer alignment to sales, marketing and service capabilities," he says.

Get some help. Reorganizing is especially challenging when you're new to a company. Flasz brought in an organizational behaviorist to provide an outside perspective. "Most executives will have someone help them to on-board," he says. "I thought, 'How do I help my team on-board me?'"

Flasz also brought in a PR specialist. "It was easy to recognize early on that technologists aren't always the most effective communicators," he says. Flasz and his PR person were very careful to use language that would be effective in

both IT and the business, and that would translate globally. "We needed to know that if we said we would eliminate a capability, it wouldn't translate as 'jobs.'"

Be crystal clear. Earlier in his career, David Jarvis, now CIO of Honeywell Aerospace, reorganized IT for a division of a large manufacturing company that was on a fast global growth track.

As with any change, people will insert their own biases in communication gaps and draw unintended conclusions.

"My senior IT team assumed that if we didn't talk about a particular group or area, then people would know that it isn't changing," he says. "But in the ranks, people assumed that everything was changing, whether we talked about it or not."

Have the tough conversations. As an IT professional in the ranks, a reorganization can be a catalyst for your career or it can be a wake-up call. This is the time, as CIO, to be honest with your people. "Your more tenured leaders will be surprised if they are asked to report to a peer," says Jarvis. "Those tough-love conversations are difficult, and it is too easy to take the easy way out. But a model that looks good on paper will fail if you don't have the talent."

Martha Heller is president of Heller Search Associates, a CIO and senior IT executive recruiting firm, and is a co-founder of the CIO Executive Council. Follow her on Twitter: twitter.com/marthaheller.

Titles, headcount and reporting lines have meaning to everyone; when reorganizing IT, CIOs must be careful.

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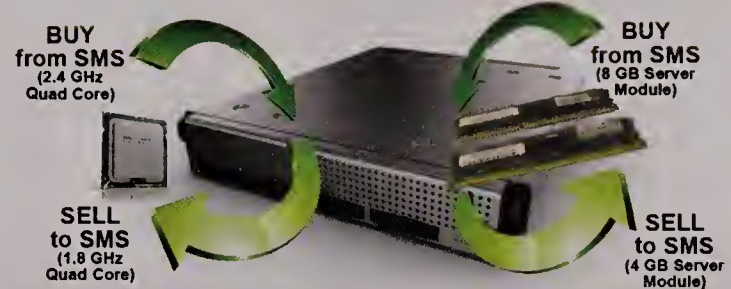
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Hard-Hitting Data

Sports injuries are inevitable, especially in full-contact sports like football. But concussions, associated with lifelong complications, are of particular concern, and researchers hope that diagnosing and treating them faster will improve outcomes. To that end, Stanford University is measuring the severity of football-related head trauma using a mouth guard embedded with sensors that record the linear and rotational force of a tackle. The data is transmitted to a computer and compared with game tapes to draw conclusions about which hits are the most dangerous and why. Dan Garza, a professor at the Stanford School of Medicine and a doctor for the San Francisco 49ers, says while collecting the data is easy, interpreting it is not. "There's a rush to want answers, but there are so many factors that cause concussions." Garza and staff are building a library of significant hits with the data and hope to eventually make recommendations about how to prevent such severe injuries from occurring.

—Lauren Brousell



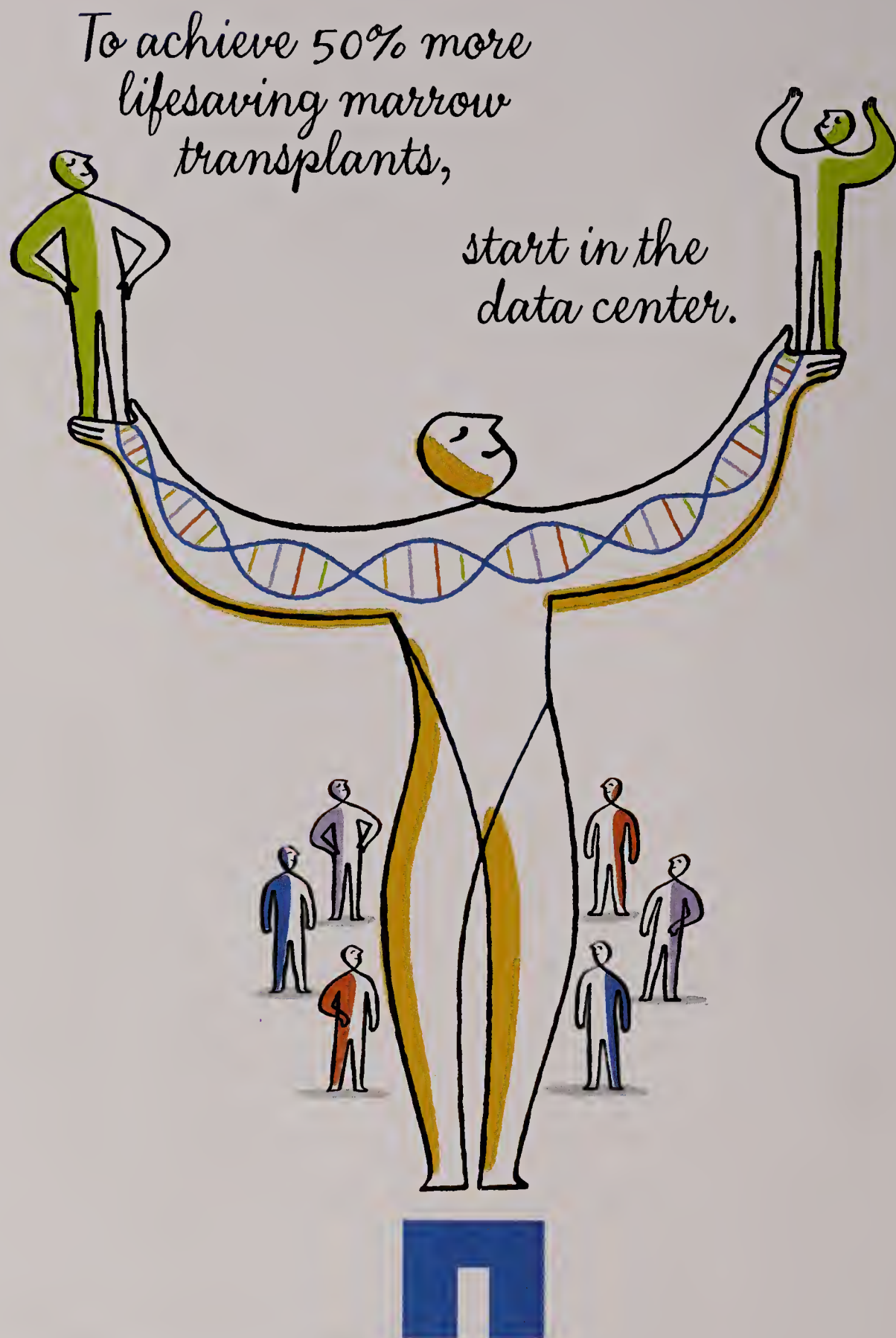
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